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THE EFFECTIVENESS OF TREATMENT AS POLICY FOR SEX OFFENDERS

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ABSTRACT

The public's perception of individuals who commit sexual offenses is much different than for other types of offenders. This can be seen in the passing of legislation targeting interventions specific to this population as a way to protect the public and reduce recidivism. In some states, sex offenders are required to participate in treatment as a condition for early release from prison. The impact of this policy is not well understood, and mandatory treatment is growing in popularity. This dissertation explores the impact of mandatory treatment for individuals incarcerated for sexual offenses on their recidivism over time. Missouri statute establishes that offenders convicted of a sexual assault offense are required to successfully complete treatment prior to being eligible for parole or conditional release. If they refuse or fail, they are required to serve their whole sentence for the offense. Data from the Missouri Department of Corrections were utilized to examine two main research questions: What are the differences among sex offenders that complete treatment the first time, go through treatment multiple times or fail, and those that refuse treatment? What is the overall rate of recidivism between sex offenders who complete treatment to those that do not? The population under study includes incarcerated individuals with access to participate in treatment through the Missouri Sex Offender Program (MOSOP) and released from prison between 1991 and 2010; this encompasses approximately 7,200 individuals. Data on reconviction, return to prison, and technical violation were obtained through fall 2014. The data utilized in this study encompass a longer follow-up period than previous studies so that long-term recidivism can be evaluated. The results show that, overall, treatment is a successful intervention and can reduce recidivism over time. Improving access to treatment may

promote change for individuals who have committed sexual offenses. The findings gleaned from understanding treatment impact, as well as how it may influence particular individuals based on their level of participation, can inform criminal justice policies that target this population.

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CHAPTER 1: INTRODUCTION

There is widespread public concern about sex offenders (Bumby, 2006; Bumby, Talbot, & Carter, 2007; Meloy, Curtis, & Boatwright, 2013). The image of a sex offender often creates feelings of fear, stress, and an idea of stranger-danger which is often perpetuated in the media by sensationalized stories. Comments of fear and disgust are common in the rhetoric when passing sex offender legislation (Lynch, 2002; Sample & Bray, 2003; Sample & Kadleck, 2008). Given the perception that sex offenders are much different than other types of offenders, the management of this population is a top policy issue, and “recent legislative trends reflect a movement toward strategies that favor incapacitation, punishment, and deterrence” for this offender group (Bumby, 2008: 2). Interventions specific to this population include: residency restrictions, chemical castration, registration and notification requirements, civil commitment, and mental health treatment, which are all aimed at reducing future offending.

Despite public unease, individuals convicted of sexual offenses consist of a relatively small percentage of the total incarcerated population. Research supports that individuals convicted of rape/sexual assault comprised about 166,200, or 12.5%, of the inmate population in the United States as of 12/31/13 (Carson, 2015). Likewise, recidivism among sex offenders is relatively low; however, understanding true levels of offending and recidivism rates for this population is difficult as sexual offenses are underreported (Lussier & Mathesius, 2012; Przybylski, 2014a; Sample & Bray, 2003; Wiseman, 2014). Based on official records, Greenfeld (1997) found that 10% of those convicted for forcible rape had a prior conviction for a similar crime type and 26% of the offenders convicted of statutory rape had a prior similar conviction. Langan, Schmitt, and

Durose (2003) found that among approximately 9,700 sex offenders released from prison in 1994, 5.3% of them were rearrested for a new sex crime within three years of their release, and 3.5% were reconvicted for a new sex crime. Other research suggests recidivism rates among this offender group of about 10-15% within five years, 20% within ten years, and about 30-40% within a twenty-year period (Janus, 2006).

The etiology of sex offending is a critical component in determining interventions that may be successful for this population. Multiple theories have been put forth to explain sex offending behavior, but there is a lack of consensus given the heterogeneous population (Faupe, 2014; Robertiello & Terry, 2007). Not only are there competing theories to explain sex offending behavior, there are also various correctional and rehabilitation theories that focus on what works to reduce the risk of future offending. Correctional treatment models in prison can be utilized to reduce risk and identify needs among offending populations (Andrews & Bonta, 2010). For sex offenders, this treatment can be modified to address factors that led to this specific type of offending in the first place (Bumby, 2006). However, the use of treatment is controversial (Zgoba & Simon, 2005), and there have been questions related to its utility (Wormith et al., 2007) due to variation among those who have committed a sexual offense.

Findings related to the effectiveness of sex offender treatment have been mixed (Barnoski, 2006; Bumby et al., 2007; GAO, 1996; Grossman, Martis, & Fichtner, 1999; Hanson et al., 2009; Kirsch & Becker, 2006; Marques et al., 2005). This has been due, in part, to the changing nature of psychological treatment models available (Hanson et al., 2002; Lösel & Schmucker, 2005). Research suggests that cognitive-behavioral therapy and relapse prevention are effective models that can reduce recidivism (Przybylski,

2014b), including in the long-term for moderate- and high-risk sex offenders (Olver, Wong, & Nicholaichuk, 2009). Other treatment models not only focus on reducing recidivism but also take a more holistic, strengths-based approach to impact both psychological and behavioral change in an offender (Lambie & McCarthy, 2005; Ward, 2002; Ward, Yates, & Willis, 2012).

Another part of the controversy associated with sex offender treatment, and institutional treatment overall, is the nature in which individuals may become participants. Day et al. (2010: 118) suggest that, “One of the defining features of sex offender rehabilitation in the criminal justice context is the degree of coercion which compels offenders to treatment.” In some states, like Missouri, individuals convicted of sexual assault offenses are mandated to treatment while incarcerated. There are disparate views on the use of coercive treatment or formal sanctions as an external motivator, ranging from the belief that only internal motivation creates lasting change (Patel, Lambie, & Glover, 2008) to the idea that being coerced into treatment has the same result as volunteering for it (Brecht, Anglin, & Jung-Chi, 1993). The impact of mandatory treatment for sex offenders is not well understood, and this policy is gaining favor across the country.

The purpose of the current study is to examine how psychological treatment for incarcerated individuals with sexual assault offenses affects the level to which they recidivate after release. Data from the Missouri Sex Offender Program (MOSOP), the treatment program operated by the Missouri Department of Corrections (MODOC), are utilized to examine two main research questions: What are the differences between sex offenders who complete treatment the first time through, go through treatment multiple

times or fail, or refuse treatment? What is the overall rate of recidivism between sex offenders who complete treatment and those that do not? Missouri Revised Statute (RSMo) 589.040 establishes that offenders convicted of a sexual assault offense in Missouri are required to successfully complete treatment prior to being eligible for parole or conditional release. Individuals that refuse to participate in treatment are required to finish their full sentence. The population under study is individuals with access to participate in MOSOP while in prison and released between 1991 and 2010. This time period captures approximately 7,200 sex offenders, and it includes those who have completed, attempted, and/or refused treatment as part of the MOSOP. Data on recidivism from MODOC were obtained through fall 2014, which provides a four to approximately twenty-four year follow-up period. Recidivism is measured by reconviction and return to prison. The timing to recidivism is also addressed.

This study aims to fill a gap in the current research by improving our knowledge about the role of treatment in prison for individuals with sexual offenses and their recidivism over time. A major challenge of the studies assessing recidivism for this population has been the limited follow-up period averaging three to five years (Langan et al., 2003; Quackenbush, 2003), and there is a growing need to evaluate recidivism over a longer period of time (Przybylski, 2014a). The data utilized in this study encompass a longer follow-up period so that the long-term risk of recidivism can be evaluated. Additionally, research supports that sex offenders are not a homogenous group and re-offend at different rates (Harris & Hanson, 2004; Sample & Bray, 2006). As a result, treatment benefit may vary based on the type of sex offense committed. The available data allow for comparisons to be made among individuals who targeted children versus

those targeting adults, as research suggests there may be differences in re-offending behavior based on victim type (Przybylski, 2014a). The findings gleaned from understanding treatment impact, as well as how it may influence particular individuals, can inform criminal justice policies targeting this population.

This paper will first describe some background and characteristics associated with individuals who have committed sexual offenses. Between-group and within-group differences will be identified to emphasize the unique needs of this population. Next, there will be a brief discussion regarding desistance and factors to consider that may impact future behavior. This section also introduces correctional management and psychiatric treatment models that are available within the prison environment. An overview of the literature regarding the major components of sex offender treatment and findings related to its effectiveness will be given next. The third chapter will provide background about the MOSOP and an explanation of the research design for this project will be presented. The results of the study will be highlighted and discussed in the fourth chapter, and this paper will conclude with policy implications of the findings as well as future directions to better understand the role of treatment for this population.

CHAPTER 2: SEXUAL OFFENDING OVERVIEW

Sex offenders are subjected to greater supervision and control than other types of offenders (Huebner & Bynum, 2006; Lynch, 2002). As a result, understanding these individuals' needs, behaviors, and patterns of offending over time are vital for developing effective programming for this population. Criminal career perspectives evaluate the overall participation along with the frequency, seriousness, and duration of offending among those that commit crimes over time (Blumstein et al., 1986). This framework, coupled with extant work in psychology regarding sex offenders specifically, will be used as a guide to address the background and development of individuals with sex offenses and sexual offending behavior. The discussion will be specific to males, as research supports the vast majority of those who convicted of sex offenses are male (Przybylski, 2014a).

This section will begin by briefly addressing how sex offenders are unique from non-sex offenders by assessing offending onset, continuity, and recidivism between the two groups. Then, within-group differences will be evaluated. Sex offenders are not a homogenous group and should not be considered as such when addressing their needs. Research suggests differences among sex offenders based on victim type (Rice & Harris, 2002; Sample & Bray, 2006) and offending pathways (Polaschek, 2003), which could impact the level to which they offend over time as well as how they desist from crime.

The remainder of the chapter will then focus on strategies that can be used to reduce recidivism for sex offenders over time. Most research has considered what influences offending behavior, but there are numerous features that can affect desistance for this population. Life course perspectives emphasizing the role of choice and timing of

events will be used to introduce this topic. Interventions to promote change will be addressed once the factors that can influence decision-making are understood. Sex offender management in the prison system, including identifying targets to reduce risk and psychiatric treatment, are used to support behavioral change post-release from prison. These aspects will be addressed along with a specific discussion related to cognitive-behavioral treatment (CBT). CBT is commonly used for treating sex offenders (Laws & Ward, 2011). The chapter will conclude with findings related to treatment impact on recidivism.

ETIOLOGY OF SEX OFFENDING

Research suggests that individuals who commit sex offenses may have unique offending behavior (Hanson & Bussière, 1998; Schwartz, 1995a). A number of demographic differences have been found when comparing these individuals (Carson, 2015; Lombardi, 2015; Levenson & Morin, 2006; Lussier & Mathesius, 2012). For instance, Miethe, Olson, and Mitchell (2006) found that sex offenders were more likely to be male, white, older at the time of their first arrest, and had fewer arrests on average over their criminal career when compared to other types of offenders (e.g. property, public-order, and other violent). Sex offenders are also more likely to be currently or formerly married than other violent convicted offenders (Greenfeld, 1997; Peugh & Belenko, 2001). Research supports differences between sex offenders and non-sex offenders in intimacy and coping as well (Cortoni & Marshall, 2001; Hanson & Harris, 2001).

There are myriad theories to try and explain why sexual offending occurs and whether it is different than other types of offending. Both single factor theories and

multifactor theories have been offered to explain this type of behavior, and there is no consensus (Faupel, 2014). A constellation of features, from early learning, deficits in cognition or distorted thinking, emotional or self-regulation deficits, environmental and situational factors, and overcoming various inhibitions all appear to play a role in the etiology of sex offending (Bumby, 2006; Faupel, 2014; Gilligan, 2008; Simons, 2014). The remainder of this section will briefly review other unique features related to sex offending as a way to emphasize the potential needs when considering this population.

Offending Onset

Onset of offending is pertinent to our understanding of sex offender patterns, as onset age appears different relative to other offenders. Social learning theory describes how various behaviors are learned and then reinforced through either favorable or unfavorable conditions (Akers & Sellers, 2009). Therefore, it is believed that “people who commit sexual offenses do so because of offense-supportive beliefs and deviant sexual interests that have been reinforced and strengthened over time” (Stinson & Becker, 2013: 2). The process by which individuals learn and internalize their own experiences can affect their behavior throughout life (Faupel, 2014). There is debate whether these deviant sexual interests begin in adolescence or occur later in life. Research has strongly supported the idea that there is virtually no continuity in sex offending behavior from adolescence into adulthood when the behavior initiated early in life (Lussier et al., 2012; Lussier & Blokland, 2013; Lussier & Cale, 2013; Piquero et al., 2012; Zimring et al., 2007). For example, Zimring et al. (2007) used three cohorts from the 1940s to 1955 to consider the link between juvenile and adult sexual offending. The prevalence of police contacts for juveniles for a sex offense was very rare; the average

was 1.5% for boys. Only 3.2% of the adult males in the study had police contact for a sexual offense. When assessing continuity from adolescence to adulthood, the authors found that only the frequency of juvenile police contacts for any offense was a significant predictor of adult sex offending. Having a juvenile sex offense did not lead to re-offending for this same crime type in adulthood. These results were based on a small sample, but they have been replicated (Zimring et al., 2009).

Other research supports the notion that among juvenile sex offenders that do re-offend, it is for a non-sex offense (Lussier et al., 2012; Piquero et al., 2012; Vandiver, 2006). The research by Lussier et al. (2012) found evidence of multiple trajectories among juveniles that offended sexually; there were two trajectories of sexual offending and five different patterns of non-sexual offending. Of the two juvenile sex offender trajectories, the vast majority were adolescent-limited, and there were about 10% in a group termed the “high rate slow desister” (Lussier et al., 2012: 1569). This group comprised individuals who started offending young and desisted very slowly throughout their teens and twenties. A small group of offenders in the study, about 5%, were found to specialize in sexual offending behaviors. This group was made up of individuals who offended against children, which may suggest possible onset and offending differences among some individuals with sexual offenses.

Research based on both self-report and official records supports that sex offending typically begins in adulthood (Hanson, 2002; Lussier, LeBlanc, & Proulx, 2005; Lussier & Mathesius, 2012; Smallbone & Wortley, 2004), and there is variation in offending over time (Lussier & Davies, 2011). Lussier and Davies’ (2011) research compared sexual offending patterns over three age periods between 18-34 years old. The

majority of the sample exhibited little change in offending frequency, but the authors found that there was a small group of offenders who had a low rate of offending during the first age period (18-24) and then a marked increase in subsequent periods. Although this group comprised a very small number of individuals and should be considered with caution, this may provide evidence that there is a chronic group of sexual offenders that begin offending in their mid to late 20s. Other research shows that the variation could be due to the differences among individuals based on who is targeted as the victim (Hanson, 2002; Smallbone & Wortley, 2004).

Recidivism

Another way to consider differences among types of offenders is to review overall patterns of re-offending. A Department of Justice Bureau of Justice Statistics (BJS) report on recidivism of prisoners released in 2005 encompasses data on thirty states in which recidivism was tracked for up to five years (Durose, Cooper, & Snyder, 2014). These authors found that 76.6% of all released prisoners had a new arrest within five years. Separating out this five-year arrest figure based on the type of offense, those who had their most serious commitment for a property offense was 82.1%, followed by drug (76.9%), public order (73.6%), and violent (71.3%). Rearrest within five years among those who had a prison commitment for rape/sexual assault was 60.1%; this was the second lowest rate with the lowest being for prisoners committed for homicide. All offender groups (violent, drug, property, public order) were more likely to be rearrested for a public order offense than any other type. Fifty-eight percent of the released individuals were rearrested for a public order offense, approximately 39% were rearrested for either a drug offense or property offense, and 28.6% were rearrested for a violent

offense. Among the specific type of violent post-release arrest charge, 1.7% of those were rearrested for rape/sexual assault; only homicide had a lower rearrest rate.

The question of specialization versus generalization, which is common in the criminal career literature (Blumstein et al., 1986), has been particularly germane to the discussion of sex offenders. Research suggests an overall sexual recidivism rate of about 10-15% after five years (Hanson & Bussière, 1998; Lussier & Healey, 2009) with rates varying over time (Harris & Hanson, 2004; Janus, 2006). Lussier and Cale (2013) specify that there are two ways to characterize specialization: the proportion of sex crimes to overall criminal offending by an offender and an offender repeating the same sex crime. Lussier (2005) suggests that sex offenders may exhibit both specialization and generalization, and this may not be contradictory but rather evidence of two parts of a criminal career. Research has found that individuals with a sex offense have a higher likelihood of committing another sex crime than someone not convicted for this type of offense (Langan et al., 2003). Greenfeld (1997) found that individuals convicted of rape and released were 10.5 times more likely than those not convicted of rape to be rearrested for rape, and individuals who served time for sexual assault were 7.5 times more likely than individuals convicted for other crimes to be rearrested for a new sexual assault. Other research suggests that sex offenders are not necessarily specialists, but individuals who committed other types of offenses are less likely to have sex offenses (Przybylski, 2014a). Although sex offenders may be more likely to have a record involving a sex crime than non-sex offenders (Lussier, 2005), these individuals have a lower frequency of offending than other types of offenders. Sample and Bray (2003) found that only homicide, kidnapping, and stalking offenses had lower re-offending for the same offense

than those who had a sexual offense. Rearrests for the same crime type were higher for individuals who committed robbery, burglary, larceny, property damage, and non-sexual assault (Sample & Bray, 2003). Likewise, Piquero et al. (2012) found that 30% of sex offenders committed another sex offense, but 60% of non-sex offenders re-offended with another offense. Miethe et al. (2006) found limited support for offense specialization among sex offenders when assessing adjacent arrests. The evidence suggests that sex offenders re-offend with lower frequency than other offender types, though they are more likely to have another sex offense than any other offender group.

The purpose of this section was to explain why individuals who have a sexual offense should be considered separately from other groups based on the offense type. A number of important findings can be gleaned from the research. The evidence suggests there may be some differences among this population, including background and offending onset, relative to other types of offenders. Furthermore, there is not continuity in offending for those with an adolescent sex offense into adulthood. Thus, factors to explain offending can inform us about needs and appropriate interventions to help these individuals desist.

WITHIN-GROUP DIFFERENCES FOR SEX OFFENDERS

Research suggests there is diversity among those who have committed sexual offenses (Przybylski, 2014a; Simons, 2014). These within-group differences can further shed light on how interventions are targeted among this population. This section will focus on the unique needs associated with sex offenders and differences among types. The etiology of offending, patterns, and processes will all be important in understanding how treatment targets should be developed to address distinct groups.

Differentiating Individuals with Child versus Adult Victims

Typologies have been developed as a way to differentiate sex offenders based on who they victimize (Robertiello & Terry, 2007; Schwartz, 1995a; Simons, 2014) and to account for within-group differences when examining recidivism (Przybylski, 2014a). The most common is to distinguish individuals who have a child victim from those that target adults, as research supports differences between these groups (Greenfeld, 1997; Langan et al., 2003; Polaschek, Ward, & Hudson, 1997). Having a male victim, more than one victim, a victim that is less than eleven-years-old, and an unrelated victim have been used to identify individuals with pedophilic interests (Seto & Lalumière, 2001).

Extant research supports a number of psychological differences among sex offenders with pedophilic interests (Hucker et al., 1986). This includes arousal to stimuli involving children that is different from other types of individuals with sex offenses (Freund & Watson, 1991; Marshall et al., 1986). Kirsch and Becker (2006) summarized research that has found differences in age at first offense, patterns of deviant arousal, variation in diagnoses, and the number and nature of prior offenses between rapists, familial, and extra-familial child molesters. Individuals with child victims are also older, on average, than those who target adults (Gannon et al., 2008; Hudson, Ward, & McCormack, 1999). In their comparison between child and adult sex offenders, Lussier et al. (2007) found that individuals who targeted male children exhibited more social withdrawal, were overwhelmed by sexual fantasies, and were more antisocial than individuals who perpetrated against an adult.

Research also suggests that there may be differing cognitive distortions reflecting attitudes toward offending between individuals targeting adults to those targeting children

(Gannon & Polaschek, 2006; Polaschek & Gannon, 2004; Robertiello & Terry, 2007; Schwartz, 1995a; Ward, 2000). These cognitive distortions can be thought of as beliefs or thinking errors that are developed over time, or they serve as a rationalization for offending behavior (Burn & Brown, 2006). Polaschek and Gannon's (2004) research found that rapists held three main implicit views to explain their offending: women are dangerous, women are sex objects, and the offenders felt a sense of entitlement. To a lesser extent, the authors found that the male offenders identified having an uncontrollable sex drive or that it was a dangerous world; thus, they engaged in offending. On the other hand, individuals with child victims may justify their behavior by thinking the victim purposefully sought out a sexual relationship with the adult or the perpetrator at least felt that the act was mutual (Gannon & Polaschek, 2005; Gannon & Polaschek, 2006; Hudson et al., 1999; Ward et al., 1995). The individual does not recognize that there was any impact or harm to the victim as a result of these cognitive distortions (Ward, 2000).

Pathways

Typologies can also be established when considering sex offending pathways. These pathways are established to take into account motivation and dynamics in offending, like active planning or pursuit of deviant interests (Kingston, Yates, & Firestone, 2012). Just like heterogeneity in sexual offending, there are myriad paths to describe offending behavior (Kirsch & Becker, 2006; Simons, 2014). For example, Proulx, Perrault, and Ouimet (1999) identified two paths, coercive and non-coercive, specifically among extra-familial child molesters; these paths signified differing behaviors and the level of planning that led to offending sexually. Polaschek (2003: 363)

characterizes offending pathways as “approach” and “avoidant.” Whereas approach-oriented sex offenders purposefully seek targets to satisfy urges, the avoidant pathway individuals feel bad about sexual offending. Approach and avoidant pathways have been considered goals representing offending patterns (Yates & Kingston, 2006). In addition to these goals, there is the manner in which offending occurs; this has led to the creation of four separate pathways: avoidant-passive, avoidant-active, approach-automatic, and approach-explicit (Ward & Hudson, 1998; Yates & Kingston, 2006). In the avoidant pathways, the difference lies in how the individual tries to avoid offending either through suppression (passive) or through misguided attempts to cope in other ways (active). Impulsive or more situational offending can be seen in the approach-automatic pathway whereas intentional or explicit planning are hallmarks of the approach-explicit pathway.

Ward et al. (1995) and Ward and Hudson (1998) created a nine-phase offense chain based upon the four pathways to explain the different stages that impact sexual offending. This nine-step model considers everything from how life events are impacted by an individual’s own background, which can impact how the individual responds emotionally; this can lead to planning a new offense and then sexually offending, which can then shape attitudes toward re-offending in the future. Research assessing the four offending pathways has found validity in differentiating between types of sex offenders (Simons, 2014). Yates and Kingston (2006) specifically found that, though there was some overlap based on victim type, there were differences between those who committed incest, rape, or had a child victim. In this research, the first group was more represented in the avoidant pathways whereas rapists and child molesters with male victims were more representative of the approach pathways.

Hudson et al. (1999) found evidence of three major offending pathways utilizing a small sample of males convicted of sex offenses. One group expressed positive feelings about offending sexually; this group of offenders exhibited planning, often felt there was a mutual relationship with the victim, and was committed to persist in offending. A second group, exhibiting nearly the opposite pathway of the first group, was in a negative state and not explicitly seeking out to offend. Rather, something occurred that led to a high-risk situation in which they sexually offended. This group felt bad about the behavior afterward and was committed to not offend again. In the final major pathway, comprised of the smallest group, the individuals mainly felt bad about their behavior but purposefully engaged in sexual offending to feel better; this group did not exhibit intentions of future offending.

Regardless of the number of discrete pathways, the extant literature underscores that there are multiple paths that impact the ways individuals engage in sexual offending over time. These include how individuals who have committed a sex offense respond to their external environment, how they cope internally with changes, and whether they exhibit impulsive or compulsive sexual behaviors (Lussier et al., 2007). All of these varying paths or factors represent critical differences among types of sex offenders, specifically among individuals that target children or adults. These pathways may be used to identify interventions to decrease recidivism among this population.

Accessibility and Crossover Offending

Accessibility is a related factor that can also impact who is targeted. Research supports that the vast majority of individuals convicted of a sex offense know their victim (Greenfeld, 1997). In terms of proximity, individuals that are actively engaged in

offending sexually (e.g. approach-oriented) seek out opportunities to be near potential victims. For those that show no explicit planning and/or feel bad about their behavior, accessibility can make opportunities to offend easier when the individual is in a negative state. Intuitively, accessibility also makes sense when considering the average older age of sex offenders compared to non-sex offenders, especially for those targeting children. Proximity to children increases as people age, as they may be in situations in which they are surrounded by their own or others' children, and/or in positions of authority (Smallbone & Wortley, 2004).

Offending may also occur as a result of opportunity rather than based on victim preference. Research supports that there are crossover offenders that target both adults and children (Simons, 2014). This same research has found that crossover offending may not be just about age but also crossing over with respect to gender and relationship (e.g. familial and extra-familial). In a study among a large group of individuals convicted of a sex offense in prison and on parole, Heil, Ahlmeyer, and Simon (2003) found that some sex offending was more driven by opportunity rather than targeting only one type of victim (e.g. child or adult); these individuals are considered crossover offenders in which they do not necessarily have a victim preference. The authors found that only about 11% of the individuals exhibited a victim preference (Heil et al., 2003); thus, accessibility or proximity can drive who and how victims are targeted. This flexibility is also important to consider when identifying ways to reduce re-offending behavior.

Recidivism among Types of Sex Offenders

Research supports that there are marked differences in the sexual recidivism rates among individuals who have committed sex offenses (Harris & Hanson, 2004; Langan et

al., 2003; Przybylski, 2014a). Sexual interest in children has been found to be one of the best predictors for re-offending sexually (Hanson & Bussière, 1998). A Bureau of Justice Statistics (BJS) study found that individuals convicted of a sexual assault offense were more likely to have a rearrest for another sexual assault offense within three years (4.7%) compared to those convicted of rape; it was much less common for individuals convicted of rape to have a rearrest for another rape charge (2.5%) (Langan et al., 2003). The same BJS study found that, on the whole, individuals convicted of rape were more likely to be rearrested for another crime compared to individuals convicted for sexual assault offenses, 46.0% versus 41.5% (Langan et al., 2003).

Lussier (2005) and Lussier, LeBlanc, and Proulx (2005) have also found differences in re-offending between sex offenders with children victims and those with women as victims. In the latter study, the authors found that child sex offenders were more likely to commit another sex offense than rapists. This second group of offenders showed more variety in their types of re-offending, including engaging in property, violent, and other offenses. The child sex offenders had lower rates of property and violent offending. More recent research has also supported that sex offenders targeting children have more sex crimes than individuals who had an adult female victim (Lussier & Cale, 2013).

Other studies have assessed recidivism by separating out types of sex offenders even further. Sample and Bray (2006) assessed re-offending among seven categories of sex offenders who were arrested in Illinois. About half of the individuals who had either a prior arrest for child molestation or rape were rearrested for another felony of any kind within five years. A little over a third of those with a prior child pornography arrest or

who offended against an adolescent were rearrested for another felony within five years. In the study, a rearrest for another sexual offense was rare with the rapist category comprising the highest percentage of those rearrested for the same crime type (6%). Nicholaichuk et al. (2000) found that among first time sex offenders, those that committed rape and participated in treatment had a higher percentage of recidivating than treated pedophiles, but among repeat sex offenders, those with child victims were more likely to recidivate sexually.

Taking age into account has been an important contribution to the literature when assessing risk to sexually re-offend (Fazel et al., 2006; Lussier & Cale, 2013; Thornton, 2006). There is variation in the re-offending patterns among this population based on age. Prentky and Lee (2007) found that recidivism among rapists tended to decline with age, similar to non-sex offenders. A model extending five years best captured the likelihood of recidivating among this group. However, the re-offending patterns were more complex among individuals who had child victims. The relationship was described as “quadratic” in which recidivism rates initially declined, then increased, flattened, and finally decreased (Prentky & Lee, 2007: 55). The model was best captured when assessing recidivism for over twenty years. Hanson (2002) also identified a linear relationship on re-offending among rapists that decreased with age. A curvilinear relationship was found for extra-familiar child molesters in which their highest risk for re-offending was between 25-35 years old before finally showing a decline after fifty years of age. Incest offenders were found to have the highest risk of re-offending between the ages 20-29 and then exhibited a marked decrease. Hence, variation can be seen even among those with child victims.

Though classifying individuals with sexual offenses into specific typologies can be problematic since many features can impact offending, insight can still be gained by assessing within-group differences (Simons, 2014). Typologies can be informative by showing the many ways individuals engage in sexual offending. Overall, the research supports that there is also diversity among specific sex offender types when looking at re-offending. It is critical to understand that there is heterogeneity among this population when thinking about desistance and how interventions should be implemented to target this change process. Many policies for individuals who sexually offend currently treat everyone the same, but there may be evidence that the success of an intervention varies based on the specific type of sexual offense. A basic understanding of the factors that may promote or impede desistance is needed before addressing the role of interventions for this population.

FACTORS AFFECTING DESISTANCE FROM OFFENDING

Just like there is a multitude of ways to explain the trajectories into offending, it is believed that the processes underlying desistance are complex and come from a variety of domains (Laub & Sampson, 2001). One of the key features when thinking about desistance is that individual lives are dynamic, and risk and other life factors change over time. Lussier (2005) has suggested that within-individual studies are needed to show this type of change that occurs through the life course. As a result, there needs to be a state-dependent approach to understand transformation.

Research supports that different factors can influence people at different times. Elder's (1995) work addresses the role of individual change depending on the context of the situation. As our environment changes, people make decisions within that context; the

processes involved are dynamic. Therefore, opportunities can play differing roles depending on the timing of the event and how it is perceived by the individual. Maruna, Immarigeon, and LeBel (2004: 13) also recognize this idea by noting that “self-determination and professional intervention...are part of a larger process of change.” Pathways are socially constructed, which mean they can change over time. An individual can make different choices as new paths emerge. Thus, timing of interventions matters.

Likewise, motivation is a dynamic feature that can impact decisions related to both continuity and desistance in offending. There has been a fair amount of debate within criminology regarding the role of choice in the desistance process. In particular, the life course perspective has conceptualized that choice is part of this process. Laub and Sampson (2001) characterize choice when describing human agency as an individual's action in the change process. There are disparate views in the literature of whether a conscious decision to change is required or if a person can change by default. Giordano, Cernkovich, and Rudolph (2002) purport a theory of cognitive transformation in which the actor plays a central role in making changes to one's life. This view suggests that internal motivation is a necessary condition for change to occur. Giordano et al. (2002) specify that in order for individuals to be prepared to change, they first have to be open to it and an opportunity needs to be available. If one of these does not come about, then desistance may not occur. Maruna (2001: 87) also identifies an active, conscious decision that is made by the offender to “make good.” He argues that offenders need to “develop a coherent, prosocial identity for themselves” to help them understand their past (Maruna, 2001: 7). This, in turn, facilitates change that can be sustained over the long-term. Somewhat comparable to Maruna (2001), Paternoster and Bushway (2009) also identify

that self-change is driven internally. In this perspective, human agency plays a vital role in leading to change over time. Paternoster and Bushway (2009) also argue that desistance is a process and not just the result of one specific event. Once the conscious choice to change is made internally, then external factors can sustain change over time. On the other hand, Sampson and Laub (1993) and Laub and Sampson (2003) suggest that turning points leading to desistance are not always conscious decisions reflecting a cognitive process. Laub and Sampson (2003: 37) identify this as “desistance by default.” Motivation plays a role in that the individual decides to act on an opportunity or situation before them. These external factors are more influential in leading to change rather than it being a conscious, internal decision.

Research by Emirbayer and Mische (1998) suggests that choice can be the result of a deliberate decision, but it can also occur unconsciously. Evidence of the first group was found in a study by Kurlychek, Bushway, and Brame (2012) when assessing recidivism among felony offenders. Kurlychek et al. (2012) consistently found a group of offenders that were considered instantaneous desisters after their conviction. This group was no longer active during the follow-up period of eighteen years. This lends support for the view that choice and change must come from within (Giordano et al., 2002; Maruna, 2001; Paternoster & Bushway, 2009). Paternoster and Bushway (2009) suggest a willful change is made by the individual. Maruna (2001) discovered that desisting offenders often created scripts that promoted this process. By doing so, they incorporated what they considered to be their “true self” (Maruna, 2001: 88). Reconciling past and present helps people think about their lives and then build a path toward the future. The view of

“natural” desistance is not well understood, and it is an important feature to account for why some individuals are motivated to seek specific goals (Laws & Ward, 2011: 208).

It is vital to understand the role of motivation when addressing interventions to change behavior. Specifically, when examining individuals incarcerated for sex offenses that may be required to participate in treatment, teasing out internal versus external motivation is a critical component. For some, they may already be committed to abstaining from future offending. Therefore, treatment will not be a necessary component to change their behavior. Others may be more reluctant to change or not understand why change is necessary. It is this latter group that requires further consideration, including identifying ways that interventions can be targeted to promote success. Time in prison may be an impetus to change for some incarcerated individuals. There are a variety of correctional programs targeting different groups of incarcerated individuals based on their risk to re-offend. These can be used to show what works and also what can be modified to address sex offenders’ unique needs.

CORRECTIONAL MANAGEMENT

Most studies on sexual offending behavior have not examined the role of imprisonment on long-term recidivism patterns. Prison can provide an opportunity for change. Not only does it represent an environmental shift for the incarcerated individual, but there are a number of interventions established within prison with the goal of reducing future offending. These interventions are important since the vast majority of all imprisoned individuals are ultimately returned to the community (Petersilia, 2003). It is essential to understand what is available in corrections generally as well as how risk is assessed to determine who should be targeted for additional supports. These can also be

used to identify the specific needs of individuals incarcerated for sexual offenses. This section will introduce what has been shown to work in corrections, including risk assessments to identify deficits and needs, and how these have been tailored for individuals convicted of sexual offenses. This section will conclude with a description of the prison environment for these individuals, and how it can be changed to create a therapeutic setting in which treatment can occur.

Risk Reduction Targets

Overall, correctional costs have soared in the past decades as more people have been incarcerated (Henrichson & Delaney, 2012). There has been a push to be efficient in the use of correctional resources and to find cost-cutting savings (Lawrence, 2014). As a result, prison programming needs to be targeted to yield the best outcome at reducing future returns to prison.

There have been several models developed for treatment in prison to aid in the reduction of future offending. The Risk-Needs-Responsivity model (RNR; Andrews & Bonta, 2010) has been the central model used within the last few decades. RNR is a key model in corrections that focuses on targeting treatment and other supports to lessen the likelihood of future offending. Risk suggests that interventions are based on the offender's level of risk, in which offenders that are lower risk may need less support than individuals who are a higher risk to re-offend. Need speaks to criminogenic needs, or factors, that are related to criminal behavior that are dynamic and can be changed. These needs include things like faulty beliefs, fantasies, and skill-deficits. Finally, the responsivity principle is based on targeting interventions from the individual's perspective, like motivation and treatment progress, which may be internally driven.

Andrews and Bonta (2010) identify eight main factors that are believed to be predictors in criminal behavior regardless of the type of offense committed. The “Big Four” are aspects associated with antisocial attitudes, including history and cognitions, personality, and associations with similar others (Andrews & Bonta, 2010: 58). The other four factors are family/marriage, work or school, leisure, and substance use/abuse. These eight serve as targets for interventions to reduce future offending.

Studies have found a reduction in future offending when targeting medium-high or high risk individuals (Prendergast et al., 2013; Thanner & Taxman, 2003; Taxman, Thanner, & Weisburd, 2006). Research by Lowenkamp, Latessa, and Holsinger (2006) found that programs that provided more referrals and support to high risk individuals for longer duration were the most successful at reducing recidivism. The authors also found that few programs they reviewed adhered to the risk principle; some programs had low-risk offenders in services for a long period, which can increase their recidivism. Ensuring that the treatment program is being delivered as intended has also been an important finding in the literature (Andrews, 2006; Landenberger & Lipsey, 2005; Lowenkamp et al., 2006).

Individuals incarcerated for sexual offenses are considered a high risk population. Hanson et al. (2009) conducted a meta-analysis using twenty-three studies and found that programs targeting the principles of need and responsivity were more effective for sex offenders than other program types. For individuals who received treatment targeting these principles, their sexual re-offending was 10.9% versus 19.2% for the comparison group. The differences were even larger for general recidivism: 31.8% for treated individuals as opposed to 48.3% for the comparison group. Beyko and Wong (2005) were

able to classify with over 95% accuracy what led to treatment completion or attrition among high-risk male sex offenders using the domains of need and responsivity. Aggression, rule violations, lack of motivation, and denial were all features that impacted participation. The challenge in corrections is then identifying the level of coercion or motivation that could drive participation to ensure high risk individuals are being appropriately targeted and treated. The RNR model can be utilized to assess both short-term and long-term factors affecting re-offending.

Assessments of Risk

Risk assessments are commonly used as part of the RNR model since risk level is supposed to drive the level of support being provided. Measures of risk are used to assist in identifying those who are the most likely to re-offend. They are derived by factors believed to be and/or are associated with empirical findings on those that have re-offended. Laws and Ward (2011: 193) argue that risk assessments tend “to identify risk primarily in terms of individuals’ deviancy and to view offenders as essentially bearers of risk.” Historically, risk assessments have been related to static factors with less focus paid to changeable or dynamic factors. Harris and Hanson (2010) highlight research identifying three waves of risk assessments over the past few decades. The first wave was based on professional judgment in which the clinician was solely responsible for identifying who they believed was most at risk to re-offend. Then, there was a shift focusing on static factors related to an individual’s background that approximated risk. The third wave has been used to improve utility in which assessments include criminogenic needs or dynamic factors.

Many risk assessments have been created to determine who is most likely to re-offend. Andrews and Bonta developed the Level of Service Inventory – Revised (LSI-R) in the 1980s to assess offenders’ risks and needs by probation and parole officers (Andrews & Bonta, 2010). This assessment has been used to measure general recidivism, but it does not account for specific features related to sexual recidivism (Hanson, 2000). The Static-99, developed by R. Karl Hanson and David Thornton (2000), is one of the most utilized risk assessments for individuals with sex offenses (Helmus et al., 2012). This tool was created from combining the Rapid Risk Assessment of Sex Offender Risk (RRASOR) and the Structured Anchored Clinical Judgment - Minimum (SACJ-Min) developed in the 1990s (Hanson & Thornton; 2000; Harris & Hanson, 2010). The Minnesota Sex Offender Screening Tool – Revised (MnSOST-R) is another common risk assessment tool (Boccaccini et al., 2009) that was created specifically for rapists and extra-familial child molesters (Hanson, 2000). The Static-99 is comprised of ten items that are focused around demographics, criminal history, and victim choice. The ten items are the offender’s age at release, the number of prior sexual offense charges and convictions, any unrelated victims of sexual assaults, any male victims of sexual assaults, convictions for non-contact sexual offenses, any stranger victims of sexual assaults, number of prior sentencing dates, conviction for non-sexual violence at the time of the index offense, and if the offender ever lived with an intimate partner for two consecutive years. Age at time of release is also an important factor that can contribute to the likelihood of continued offending (Barbaree et al., 2003; 2009; Hanson, 2002; 2006). This makes sense as it is well known that everyone desists, but the rates may vary (Doren, 2006; Gottfredson & Hirschi, 1990; Sampson & Laub, 2003). The revised

versions, Static-99R and Static-2002 (Hanson & Thornton, 2003; Helmus et al., 2012), have done a better job at breaking out age groups to account for older offenders (Harris & Hanson, 2010; Helmus et al., 2012). As sentence lengths grow for incarcerated individuals, accounting for age at the time of release is a necessary factor attributing to risk (Fazel et al., 2006; Lussier & Healey, 2009).¹

Static assessments are focused on factors that are not changeable. However, there are aspects that may change an individual's level of risk to re-offend. Some of these dynamic factors could be targeted within the treatment environment, which could lead to change above and beyond focusing solely on past behavior. Newer generation assessments have begun accounting for these dynamic risk factors. For instance, the Stable-2000 and Stable-2007 were developed by R. Karl Hanson, Andrew Harris, Terri-Lynne Scott, and Leslie Helmus to predict changes in recidivism risk over the longer-term (Harris & Hanson, 2010). The Stable-2000 was initially comprised of sixteen items in six main sections, but after assessing the validity of these items, the revised version, Stable-2007, includes only five sections. The five areas are significant social influences, intimacy deficits, sexual self-regulation, general regulation, and cooperation with supervision. Other assessments, like the Violence Risk Scale-Sex Offender (VRS-SO), have been developed to address both risk and measures of change (Olver et al., 2007). Taking into account these dynamic factors that can impact re-offending is needed to determine the most salient treatment targets.

Research supports the use of actuarial assessments over unstructured clinical judgment (Hanson & Morton-Bourgon, 2009). However, research accounting for absolute

¹ Though see Rice and Harris, 2014, who suggest that age at release is not a good predictor for future re-offending risk.

risk of recidivism among sex offenders has varied widely when using static risk assessment tools. Hanson (2000) and Hanson and Morton-Bourgon (2009) found that the Static-99 and MnSOST-R were among the measures that best support the prediction of sexual recidivism, but Boccaccini et al. (2009) argue that the Static performs better than the MnSOST-R. Helmus et al. (2012) support the validity of risk assessment tools like the Static-99R and Static-2002R, but they caution that a risk tool alone is not sufficient at understanding risk. Instead, they endorse the use of risk assessment tools along with structured clinical judgment. It may be possible to better account for risk with the development of assessments that also include dynamic factors. Research has supported the efficacy of risk tools like the Stable-2000 and Stable-2007 (Hanson et al., 2007), but there has been little replication or cross-validation of these assessments (Harris & Hanson, 2010).

There are a number of static and dynamic factors that can influence an individual's risk to re-offend. Therefore, correctional interventions should be targeted in a way to support an individual's specific needs. Above and beyond some of the criminogenic needs of offenders, there appear to be some distinct aspects associated with individuals with sex offenses that may be important treatment targets while in prison. Part of this is giving consideration to the prison environment in which treatment may be provided.

Prison Environment for Offenders

Incarcerated individuals convicted of sexual offenses confront unique challenges in the prison environment. These individuals are often ostracized in prison as a result of who they perpetrated against. In a survey of inmates regarding prison fear, O'Donnell and Edgar (1999) found that about three-quarters of the inmates felt that those convicted of sexual offenses deserved to be victimized through assault, threats, or insults while in prison. As a result, these individuals need to be segregated from other inmates in prison for their own safety (Ward et al., 2007). Segregation may limit opportunities to participate in various activities (Schwartz, 1995b), but certain benefits may be derived if this population and their treatment is kept apart from the general prison population.

One environment where a separation can be achieved is within a therapeutic community. The therapeutic community (TC) has been used as both a community-based model and adapted for use within prisons to support various groups of incarcerated individuals (De Leon, 2000; Inciardi, Martin, & Butzin, 2004; Rice, Harris, & Cormier, 1992; Ware, Frost, & Hoy, 2010). TCs were available in correctional settings in the 1960s and 1970s, but they lost favor in the 1980s and were subsequently closed (Martin et al., 1999). Since then, these types of programs have been re-emerging. The purpose of the TC is to provide treatment that is not limited to just clinical support (Jones, 1956). This program model is considered a "self-help" approach, which utilizes peers to help promote change (De Leon, 2000; Wexler, 1995). It is believed that TCs are effective when the individual is immersed within an environment in which treatment is the predominant focus rather than having competing interests, and individuals are able to interact with similar others in a prosocial way to understand their behavior (Inciardi et al., 2004). Within this communal environment, individuals participate in group therapy,

community meetings, and other activities each day. Individuals are engaged in a mutual effort to address their own problems by living and working together (Wexler, 1995). Individuals are autonomous in this environment, but they are also held accountable for their actions. Thus, the underlying premise of the TC is to facilitate the change process through these interpersonal relationships and dynamics (Melnick et al., 2001).

Segregation in the form of a TC can help overcome some of the stigma individuals incarcerated for a sexual offense face while in prison. The TC is one environment that allows for open discussion and keeps these inmates separated from other groups within the prison. Confidentiality can be maintained as a result of this separation, and there is less fear of reprisal for the type of offense committed by this population within a closed environment. Schwartz (1995b:8-5) argues, “Residents do not have to be concerned about hiding their crimes or about ridicule or physical assault once their crimes are revealed.” The therapeutic environment can be constructive by connecting the individual to similar others. It can also reinforce what is being learned during group therapy (Ware et al., 2010). Sex offender treatment often occurs in a group setting and experiences can be shared among like individuals (Beech & Fordham, 1997; Beech & Hamilton-Giachritsis, 2005). These individuals can have open discussion about their offending behavior and challenge one another regarding their “distorted thinking” and minimization or rationalization of their behavior (Colton, Roberts, & Vanstone, 2009: 329). These conversations can continue after therapy ends since the individuals are exposed to a communal living environment in which open communication is encouraged and promoted (Ware et al., 2010). Ryan and Deci (2000: 73) also suggest that a person needs “ambient support” to help become internally motivated. The environment can, in

turn, positively affect the success of treatment. TCs may help individuals prepare for their release back into the community by learning the skills necessary to interact with others.

Research assessing TCs has mainly focused on individuals with substance use needs. This research has mainly been positive with the strongest outcome occurring when the continuum of care continues after release from prison (Griffith et al., 1999; Inciardi et al., 2004; Knight, Simpson, & Hiller, 1999; Martin et al., 1999). For instance, Wexler et al. (1999) conducted a review of the Amity TC program to assess outcomes thirty-six months after release between treatment-completers with aftercare, only in-prison completers, treatment dropouts, and those with no treatment thirty-six months after release. The authors found that only those that completed the aftercare component showed a significant reduction in re-incarceration during the three year follow-up period. The authors noted that individuals were given the choice to participate in aftercare. Thus, there may be differences in the motivation level in which those that chose to participate in aftercare may have already been more motivated to not continue to offend. This issue of motivation for continued participation in treatment is common (Melnick et al., 2001), so outcomes should be assessed relative to time spent in prison only. Unfortunately, there is limited research evaluating the effectiveness of TCs for individuals with sexual offenses (Ware et al., 2010). What is known can be derived from evaluations of TCs for other groups in prison. Importantly, length of time in the TC is an important factor, as outcomes on re-offending have improved the longer someone is within the treatment environment (Condelli & De Leon, 1993; Condelli & Hubbard, 1994; De Leon, 1984; Ware et al., 2010). At a minimum, it appears that nine to twelve months is needed to make any appreciable impact on reducing recidivism (Wexler, 1995).

The purpose of this section has been to introduce some of the theoretical components associated with desistance as well as describe the concrete factors that may help promote change while in prison. Most research about individuals with sex offenses relies on individuals that are known to the police, incarcerated, and/or in treatment. Interventions are thus derived from a limited population of seemingly higher-risk offenders. However, larger models showing what works can be adapted for use with sex offenders. There are ways in which the management of this population in prison can be combined with implementation of effective treatment to promote success.

PSYCHIATRIC TREATMENT MODELS

Psychiatric treatment was a major component for managing sex offenders in the United States until the 1980s (Janus, 2006). Many states, including Missouri, had policies that allowed individuals convicted of sex offenses to be hospitalized for treatment in lieu of going to prison (Fujimoto, 1992). Then, there was a philosophical shift in the belief that psychiatric treatment was not effective in dealing with this population (Andrews & Bonta, 2010), and there was a simultaneous push toward more punishment-based measures (Akers & Sellers, 2009). By 1990, statutes on the use of psychiatric treatment in lieu of prison were mostly repealed. Mental health treatment for individuals with sexual offenses has subsequently undergone substantial changes. Although the type of psychiatric treatment these individuals receive has changed over time, the overall goal has always been to reduce recidivism (Wormith, Gendreau, & Bonta, 2012).

The role of treatment has taken on particular meaning for individuals convicted for a sex offense because this group can face consequences for non-participation that may not be seen with other types of incarcerated individuals. If individuals convicted of sex

offenses are uncooperative in treatment or are still considered a significant risk to the community at the end of their prison sentence, they can be committed to a mental health facility for an indeterminate period of time; twenty states currently use civil commitment post-release from prison. There is a push in understanding whether treatment is effective and how incarcerated individuals can be best served within the prison environment to reduce the likelihood of re-offending. This section will first address some of the models underlying the change process for individuals. This will set the stage for understanding how treatment can be made effective for this population. Then, cognitive-behavioral treatment will be specifically addressed, as it is one of the most common models currently utilized (Bumby, 2006). The major components associated with treatment will conclude this section.

CHOICE AS PART OF THE CHANGE PROCESS IN TREATMENT

Understanding how people change gives insight into explaining ways treatment can be modeled to be effective, especially for those not motivated at the outset to change their behavior. Extant literature in the criminology field was previously discussed to introduce the idea of human agency as part of the change process. There are a variety of models and theories within the field of psychology that underlie the goals of treatment to bring about change for an individual and sustain it over time. A few of these will be introduced to serve as a basis for understanding what treatment needs to do in order to increase the likelihood for success, especially when considering individuals that may be coerced into treatment.

The Transtheoretical Model (TTM)

TTM is one way to consider how behavior can be linked to change, as it is a model of behavioral change. The primary purpose of the model is to identify how people change and the stages and processes they go through when choosing to modify their behavior. This theory was initially proposed by Prochaska and DiClemente (1982), and it has since been reviewed, modified, and elaborated upon to describe intentional change by an individual. Prochaska, DiClemente, and Norcross (1992: 1110) suggest that change occurs by “doing the right things (processes) at the right times (stages).” This model was initially applied to addictive behaviors like smoking.

Prochaska and DiClemente (1982) originally introduced five stages.² The first stage is precontemplation. In this stage an individual has not acknowledged that there is a need to change and has no plans to do so. DiClemente (1991) defines the precontemplation stage based on the four R's: reluctance, rebellion, resignation, and rationalization. The individual is either unwilling to change, unaware of a problem, or has resolved that change will not occur. It may be that the individual does not know the steps to take in order to change. The second stage is contemplation. An individual at this stage may be aware there is a problem behavior but has not decided to make a change. The individual may be weighing the pros and cons of the behavior to decide whether to continue. The costs and benefits of the behavior may be different for a smoker versus someone engaging in illegal behavior. For the latter group, re-offending or concerns

² There has been a debate about the number of discrete steps, ranging from four (McConaughy, Prochaska, & Velicer, 1983) to a sixth stage addressing long-term change (Carbonari & DiClemente, 2000; Prochaska, Norcross, & DiClemente, 1994). Other findings suggest that only a few stages may be sufficient (Carey et al., 1999; Prendergast et al., 2009). Questions have also emerged about the construct of discrete stages of change. It is noted that the stages may actually be a scale that represents “continuously distributed motivational processes” (Miller & Tonigan, 1996, as cited in Prendergast et al., 2009: 163). Thus, there is a continuum that people fall on as related to their motivation. McConaughy et al. (1983: 374) suggest that there may be “differential involvement” in multiple stages at one time and an individual just may be weighing toward one stage more specifically.

about future imprisonment may be a component of this analysis. Prochaska et al. (1992: 1104) explain, “Serious consideration of problem resolution is a central element of contemplation.” In the third stage, preparation, an individual is taking initial steps to reduce or change the behavior. The individual has made the decision to change and is beginning to take steps toward action. There is an intention to change but not a full commitment toward moving forward. The fourth stage is the action stage. The individual has modified the behavior, which may include altering the environment in order to enact change. Successful action is the result of actually stopping a behavior for at least a period of one day but typically longer. There is overt action on behalf of the individual to not engage in the behavior; it is conscious commitment, which then leads to maintaining the changed behavior. The fifth stage, maintenance, represents the long-term continuation of change. Individuals are sustaining their new lifestyle change and are also working to prevent relapse. Paternoster and Bushway (2009) would identify this as a complete shift within the individual. Maruna (2001) would suggest that to do this, individuals are embracing their past and incorporating it into their story. This process takes time, and individuals need a taste of success to lead to sustained change.

The stages in the model are not linear in direction, moving from one step to the next, but more like a spiral where individuals can move back and forth between stages before ultimately being successful (Prochaska et al., 1992). Prochaska et al. (1992: 1104) argue that this is because “relapse is the rule rather than the exception with addiction.” Brownell et al. (1986) take this idea further by delineating between lapse and relapse. They denote that a lapse would be like the slip that is part of the change process. Relapse

would be the decision to return to the problematic behavior; it is an outcome. These findings suggest that individual motivation fluctuates at different times and stages.

Therapeutic interventions can be created based on the individual's stage of change. In situations where treatment is coerced, these methods may help the individual 'buy-in' to the treatment. Motivational Interviewing (MI) is one such intervention that has been created with the goal of promoting readiness for internal change by the individual. TTM has been used as the theoretical underpinning to this practical application. MI is a therapeutic process that helps the individual recognize the 'why' to change. It has been thought of as the "external trigger" (Vivian-Byrne, 2004: 188) to start the internal drive toward change. It has been used to address substance use (Miller & Rollnick, 1991) and medical interventions (Rubak et al., 2005), and it has been used with probationers and parolees. Rubak et al. (2005) found that when applied to general health conditions, MI was good for those that were either reluctant or ambivalent to change. Brown and Miller (1993) found that individuals who received MI while in residential alcohol treatment more fully participated in treatment and had better outcomes.

There is an underlying premise in MI that intervention strategies should be targeted to the specific stage or state of the person. There are different goals related to building motivation and strengthening commitment (Miller & Rollnick, 1991). Identification of the individual's stage of change can add insight into the behavior rather than focusing solely on external factors that may have led to treatment in the first place (Broner et al., 2005). Prochaska et al. (1992) suggest that if individuals only come to treatment as a result of external pressure, they will resume their past behavior once the pressure is off. Those in the initial stage of change, precontemplation, may be the most

challenging to engage in treatment, as they are not interested and do not believe they have a problem. This group may also be the most likely to drop out of treatment given the opportunity. Stage-based strategies in MI are believed to be effective in overcoming an individual's ambivalence. DiClemente (1991: 194) suggests that, "We cannot make precontemplators change, but we can help get them to contemplation," and there is evidence supporting this idea. Antiss, Polaschek, and Wilson (2011), using a quasi-experimental design with a matched sample, found that when brief MI was offered to a group of individuals convicted of diverse offenses, their current stage of change increased by an average of one stage compared to those not offered the intervention. This provides some verification of the change process.

TTM offers an explanation for how change occurs. For those making the internal choice to change, they will quickly move through the steps outlined in the model. Individuals may decide change is in their best interest. Others require external sources to direct their path. Similar to Laub and Sampson's (2003) argument that turning points lead to desistance, the external push to treatment may be the impetus to change. Giordano et al. (2002: 1000) call these opportunities "hooks for change." Treatment may act as a hook in that it provides exposure to a different situation enabling new possibilities. An individual can begin evaluating choices within this context. A stage is postulated in TTM in which individuals weigh the costs and benefits to engage in a behavior. They can then make the decision to either move toward the preparation stage or persist in offending. Paternoster and Bushway (2009) affirm this view by suggesting that individuals begin thinking about changing their identity, which then impacts their interests and orientation toward the future. Maruna's (2001) work is also guided by the premise that individuals

are in different stages, which explains why some continue committing crime and others do not.

Positive Psychology and Strengths-based Approaches

A different strategy has been to move beyond addressing only the negative behavior to be changed and instead focus on the whole person. This idea is rooted in the positive psychology movement (Seligman & Csikszentimihalyi, 2000). Positive psychology is strengths-based with the goal of finding ways for individuals to become their happiest self and attain the most satisfaction from their lives. Two theories related to positive psychology will be briefly introduced and discussed: self-determination theory (SDT; Deci & Ryan, 1985; 2000) and the good lives model (GLM; Ward, 2002). Both models can offer some insight when considering how treatment can impact individual behavior.

SDT is a motivational theory to explain goal pursuits. It is based on the assumption that individuals have innate psychological needs that impact the level to which they pursue what is important to them over the course of their life. This theory was formulated by Deci and Ryan (1985; 2000). Ryan and Deci (2000: 76) suggest that “motivation is perhaps the critical variable in producing maintained change.” SDT identifies autonomy, competence, and relatedness as the three innate psychological needs that impact goal pursuits. All three needs must be met for the best outcome. Autonomy is related to personal freedom to engage in activities and behave in ways that are driven by the individual. Autonomy impacts intrinsic motivation, and it is affected by external pressures. Internal motivation decreases when individuals do not feel it is their choice to participate or engage in an activity, and it can lead to a poorer prognosis in the long-term.

The outcomes are more positive when an individual has initiated the change. Competence suggests that individuals impact their environment as well as learn from it. Relatedness is associated with being connected with others. This innate need can also impact choice, as relatedness can help facilitate the internalization of the external pressure.

SDT would explain that individuals engage in maladaptive behaviors because they are unable to attain their needs in acceptable ways. This aligns with research in criminology that suggests crimes are committed because individuals cannot obtain what they value in socially tolerable ways (Agnew, 2001; Ward & Marshall, 2004). Therefore, SDT would emphasize that interventions be linked more broadly to an individual's overall goals in life, with the goals being rooted in the three innate needs. SDT has a premise that there are positive reasons for living and goal-seeking. Taking a holistic approach is “designed to facilitate overall wellness and meaningful change for individuals” by developing positive goals, emotional balance, and overcoming obstacles (Bumby, 2006: 7). There is a combination of addressing impediments such as maladaptive thinking patterns, which are a common emphasis in sex offender treatment, while simultaneously improving the overall health of the individual.

A more common strengths-based model in sex offender literature is the Good Lives Model (GLM). The GLM is purported to be a “conduit” between criminological and correctional theory (Ward, Yates, & Willis, 2012: 108) by explaining criminal behavior and offering ways to better enable offenders to enhance their lives. Offending risk can be managed or reduced by attaining a fulfilling life and having psychiatric well-being (Willis, Prescott, & Yates, 2013). According to Laws and Ward (2011: 175), the

GLM is a rehabilitation theory that “aims to equip offenders with the internal and external resources to successfully desist from further offending.”

The GLM identifies ten primary human goods that all individuals, regardless of status, are trying to seek (Day et al., 2010). These primary goods, which can also be thought of as goals, are: life, which includes basic physical needs and healthy living; knowledge, or understanding; excellence in work and play, which includes pursuing activities for one’s own sake; autonomy, or choice; inner peace, which is “emotional self-regulation”; relatedness and community, both of which involve bonding with others and having a sense of belonging; spirituality, which is finding meaning or purpose in life; happiness, or finding pleasure with one’s life; and creativity, in which the individual puts his or her stamp on the way something is done (Day et al., 2010: 51-52). In this model, as in SDT, obtaining or gaining access to all of these goods may lead to the most fulfilled life.

Through the GLM lens, criminal offending is the result of either seeking these goods through criminal activity or as a byproduct that can subsequently lead to offending (Laws & Ward, 2011). Treatment utilizing the GLM model is predicated on the idea that through the attainment of a good life in prosocial ways, an individual’s well-being will increase, which may indirectly reduce recidivism (Marshall et al., 2005). There are different ways someone can be motivated given the myriad goals available to be achieved. Motivation levels can vary for some of the goals, and not everyone will value each of these goods in the same way. Thus, treatment is tailored to the individual. This model also takes into account the individual’s environment as a factor that can impact the attainment of these goals.

The GLM moves beyond the RNR model. As noted previously, the RNR model is most commonly used in corrections. There has been a healthy debate within the literature about the RNR and GLM models, and which is more supportive for impacting change (Andrews, Bonta, & Wormith, 2011; Polaschek, 2012; Ward & Stewart, 2003; Ward, Yates, & Willis, 2011; Wormith, Gendreau, & Bonta, 2012). A criticism of the RNR model is that it is more homogenous and does not take into account specific individual-level factors that influence and motivate an individual to change (Laws & Ward, 2011; Ward & Stewart, 2003). It is mainly deficit-based whereas GLM is strengths-based. However, others suggest that RNR is more popular because it accounts for different levels or risk; therefore, it is not one size fits all (Stinson & Becker, 2013). Proponents of RNR also argue that there is an overemphasis on noncriminogenic needs in the GLM with a lack of focus on decreasing criminal behavior (Andrews et al., 2011). These authors argue that risk prevention has to be an important focus because only addressing well-being is not sufficient. For instance, Andrews et al. (2011: 740) suggest there could be crime-promoting behaviors that increase an offender's sense of well-being, so interventions should take a "direct" approach by addressing criminogenic needs rather than goods. In response to this comment, Ward et al. (2012: 98) note that "it is a mistake to contrast human needs and criminogenic needs in the way that Andrews et al. do; they are integrally linked." These authors further assert that GLM is more holistic by accounting for features of RNR and other primary goods that can impact desistance. Laws and Ward (2011) suggest that GLM incorporates additional factors within treatment, such as the therapeutic alliance, motivation, and working on continued desistance.

The therapeutic alliance is the relationship between the individual and therapist in which the therapist negotiates goals and tasks in treatment on an individual basis as a way to form a stronger relationship (Polaschek & Ross, 2010). There has been an emphasis on this relationship more recently (Marshall et al., 2005; McMurren, 2010). Research also suggests that treatment engagement is enhanced when therapists have “warm and respectful attitudes towards offenders” (McMurren & Ward, 2010: 82). This is in contrast to prior beliefs of the therapist/offender relationship for sex offenders. This approach was often confrontational in which treatment was rigid (Day et al., 2010), and the therapist was unresponsive to forming a bond with the individual being treated. This model has been found to be less effective (Kear-Colwell & Pollock, 1997), as an individual may feel rebuffed rather than feeling the therapeutic relationship is more collaborative (Serran et al., 2003). There can be more flexibility through the therapeutic alliance. The individual may feel more in control of the situation, which may improve motivation and potentially enhance treatment success.

Treatment that takes a more holistic approach may impact both sexual and overall recidivism. Although this approach to treatment is the cornerstone of the GLM, there is little research to date to support findings of this model specific to treatment outcome. Ward and Maruna (2007) note this is a limitation of the model in part because it is a newer model to address offending and ways to target treatment. More recently, Laws and Ward (2011) have identified emerging research that utilizes the components of the GLM for sex offenders and other offending populations alike, but outcome studies are still limited. For instance, Willis and Ward (2011) conducted semi-structured interviews with a small sample of individuals incarcerated for sexual offenses to assess the importance of

the primary goods as these individuals faced re-entry. Overall, those interviewed endorsed the majority of primary goods and identified challenges they were facing that impacted their goal attainment. Research by Willis, Ward, and Levenson (2014) focused on the operationalization of the GLM within treatment programs, and they found that adherence to the positive delivery approach of the GLM model was occurring in the sites that were visited. In their comparison between treated and untreated sex offenders that adhered to the GLM model, Serran et al. (2007) found that the treated group identified more effective coping strategies when thinking about high-risk situations. These findings suggest the GLM could have a positive outcome for those convicted of sexual offenses, but there remains a significant amount to be learned regarding the impact of various treatment models on future offending.

There are multiple approaches that can be considered when addressing behavior change. Different treatment philosophies underscore the way change can occur, from identifying the various stages that account for the change process to taking into consideration holistic factors that can help support a full lifestyle transformation. These theoretical models can then inform the method in which treatment is delivered, as there are a multitude of features that can be targeted to impact motivation and promote change.

COGNITIVE-BEHAVIORAL TREATMENT (CBT)

CBT is the most common treatment model utilized by individuals who have committed sex offenses, and it was developed from a social learning framework (Yates, 2003). There is a belief within this model that those who offend have skill-deficits; therefore, treatment targets those deficits and uses the tactics of avoidance and relapse prevention to reduce offending (Bumby, 2006; Laws & Ward, 2011; Stinson & Becker,

2013). The purpose of treatment is to educate individuals on their distorted thinking and how it affects their offending. Individuals are encouraged to constructively challenge their beliefs and find prosocial alternatives to prevent continued offending (Gannon & Polaschek, 2006). This often includes developing a plan to overcome those risky situations. Some of the most common CBT components focus on offense acknowledgement and accepting responsibility, understanding the origins of the behavior, identifying the deviant cycle/triggers that may lead to re-offending, understanding victim impact, and/or making restitution (Green, 1995a; Stinson & Becker, 2013; Yates, 2003). Each of these elements will be briefly highlighted in this section.

Admission of guilt has been considered a prerequisite for “meaningful” treatment participation for sex offenders (Green, 1995a: 10-4), and it is thought of as a key component of treatment success (Levenson & Macgowan, 2004). Garland and Dougher (1991) also suggest that treatment can only really begin once sex offenders acknowledge a problem. However, some form of denial is very common among those who have committed a sex offense (Day et al., 2010; Lord & Willmot, 2004). These individuals in denial are often thought of as unmotivated or unwilling to engage in treatment, since treatment is predicated on targeting cognitive distortions (Yates, 2003). Faulty thinking may include blaming the victim for the behavior, denying, or minimizing, all of which may support attitudes of continued offending. Therefore, individuals in denial may be rejecting the basic tenets of treatment.

Some researchers have argued that denial and excuse-making for behavior are not necessarily unhealthy, and it may not indicate risk of continued offending (Hanson & Morton-Bourgon, 2005; Langton et al., 2008; Mann, 2004). Maruna and Mann (2006)

suggest that it may be better for offenders to either minimize or make excuses for their behavior, as minimizing a crime suggests that the individual knows the behavior is wrong (Hanson & Morton-Bourgon, 2005). Marshall et al. (2001) argue that individuals do not have to overcome denial to be successful and reduce their re-offending. In these authors' study, sex offenders in "categorical denial" could participate in treatment, and they would not need to discuss their incarcerating offense nor were attempts made to get the offender to admit. Subsequent research evaluating this program found treatment was still effective for those in denial, and this group had significantly reduced recidivism rates (Marshall et al., in press, as cited in Marshall, Marshall, & Kingston, 2011). Despite these findings, admitting guilt to the act that led to imprisonment and accepting responsibility are generally required in treatment programs. As a result, there may be individuals who are unable to access treatment, though they could still derive a benefit.

Another component common within CBT is to understand the origins of the deviant behavior as well as the cycle that leads to offending. Educational materials and assignments are usually given to build prosocial skills that are believed to be lacking within the individual. For instance, a sex offender may have intimacy deficits in which he feels that the individual that was victimized liked the sexual act or was deserving of it. A study by Polaschek and Gannon (2004) found that males convicted of rape commonly held beliefs of entitlement in having sex with whomever they wanted and that women were sex objects. Therefore, treatment would target those distorted thinking errors that led to the offending behavior. Additionally, some sex offenders have experienced their own victimization when they were younger (Green, 1995b), so a target would be to understand this prior incident and how it may have affected the current offending pattern.

Once an individual is able to understand his deviant cycle, a plan can be established so that situations, emotions, and other precursors that lead to offending can be avoided in the future.

A final goal common within treatment is victim empathy and/or making restitution. Empathy, when considered a “state” and not a trait, can vary across environments and thus be changeable during treatment (Yates, 2003: 205). The idea is to help the individual understand the impact of his behavior on the victim by taking on another’s perspective or shifting from “self-centeredness to other-centeredness” (Green, 1995b:13-4). This may include actual interaction between a victim and the perpetrator, but it may more likely occur within the treatment group environment in which individuals role-play that interaction. Victim awareness and/or restorative justice efforts are ways that may help individuals repair harm and take more responsibility for their actions (Andrews & Bonta, 2010). This, in turn, may positively impact an incarcerated individual’s reintegration into the community after being released from prison.

Another aspect of treatment for individuals who have committed sex offenses includes relapse prevention, and it is often coupled with CBT (Kingston, Yates, & Firestone, 2012). Like CBT, the relapse prevention model was derived from social learning theory (Keeling & Rose, 2005). Relapse prevention was first created for use within the substance abuse field, but it was later adapted for use with sex offenders (Polaschek, 2003). The overall goal is for these individuals to “develop self-management skills in order to avoid offending” (Keeling & Rose, 2005: 408). This includes individuals increasing awareness of their choices, developing coping skills, and gaining control over their lives (Pithers & Cumming, 1995). In doing so, individuals identify

risky situations that could lead to re-offending and then are taught strategies to cope with and/or overcome these high-risk scenarios (Kirsch & Becker, 2006). A plan or script on how to manage these environments is created as a result.

There are a number of key components identified as part of CBT for individuals with sexual offenses. The overall goals are to target distorted patterns of thinking and teach individuals how to control or modify their deviant behaviors (Beech & Fordham, 1997). Psychiatric treatment may also include other modules addressing things like assertiveness training, autobiographical awareness, sex education, stress reduction, and arousal reconditioning (Zgoba et al., 2003). This type of treatment is typically done in a group setting. Research assessing CBT has found that group cohesion and the ability to express feelings within the group environment have led to reductions in pro-offending attitudes (Beech & Hamilton-Giachritsis, 2005). It is believed that the factors highlighted through this section can also effectively reduce future offending.

OUTCOMES ON TREATMENT AND RECIDIVISM

The literature tends to show mixed findings related to the success of treatment for individuals convicted of sexual offenses, especially when the effectiveness of treatment is measured through recidivism rates (Przybylski, 2014b). Meta-analyses have found CBT to be effective at reducing recidivism. For example, Hanson et al. (2002) reviewed forty-three studies, with a combined sample size of 9,454 offenders, on various sex offender treatment methods and their effectiveness at reducing recidivism. The overall sexual recidivism rate for the entire group of treated individuals was 12.3% as opposed to 16.8% for the group of non-treated individuals, and it was 27.9% versus 39.2% for the overall general recidivism rates between the treated and untreated groups. Among the findings

specific to CBT, Hanson et al. (2002) found that the sexual recidivism rate was 9.9% for the treated individuals and 17.4% for non-treated individuals, and there were also significant differences between the treated and non-treated groups on general recidivism. A study by Lösel and Schmucker (2005) was one of the largest reviews on the effects of different types of psychological and other treatment interventions; it encompassed over 22,000 offenders. The authors found that those that received treatment had sexual recidivism rates 6.4 percentage points less, a 37% reduction, compared to the comparison group. Additionally, both violent recidivism and general recidivism were significantly less (44% and 31%, respectively) for the treated group than the control group. Of the psychological treatments reviewed, the authors found that CBT had the most significant impact on sexual recidivism.

McGrath et al. (2003) also conducted an evaluation of a CBT program for adult sex offenders in the Vermont prison system. Using a retrospective study design in which there was no random selection, McGrath et al. (2003) compared three groups of offenders: offenders who volunteered to complete treatment, participants that began treatment but dropped out or were terminated from the program, and offenders who chose not to receive treatment. The authors found significant differences between offenders who completed treatment and those that either completed some or none. The sexual recidivism rate was about 5% for the completed-treatment group compared to about 30% for each of the other two groups. Violent re-offending was also significantly lower for offenders who completed treatment. Despite some positive findings, there were a number of differences between groups, including prior violent convictions, one group being longer at risk, and the treatment group having longer sentences than the comparison

groups. This is a particularly important difference because Vermont has indeterminate sentencing and agreeing to participate in treatment could affect an offender's time to release. Selection bias was also introduced when the intent-to-treat group was not included as part of the treatment group.

A more recent evaluation that addressed some of these methodological issues was conducted by Olver, Wong, and Nicholaichuk (2009). This research compared a cohort of moderate- and high-risk sex offenders who received six- to nine-month high intensity inpatient CBT to a group of incarcerated individuals who did not receive treatment. The sexual reconviction rates for the intent-to-treat group, comprised of completers and dropouts, was reduced by about half compared to those that were untreated at two, three, five, and ten years post-release. The difference between the two groups was at its greatest at year two, but it was still significant by year ten. This study built on prior work by Nicholaichuk et al. (2000), who compared a smaller sample of high-risk sex offenders that volunteered to receive treatment to a group that did not. The authors found that approximately 14% of the treated group had a new sexual conviction whereas about 33% of the untreated group had a new conviction. No significant difference emerged between the two groups for a new non-sexual offense. These authors suggest that treatment needs to target overall recidivism, not just for sexual behavior.

In contrast, some researchers have found that treatment was not significantly associated with sex offending behavior but did reduce general recidivism (Quinsey et al., 1998; Zgoba et al., 2003; Zgoba & Simon, 2005). Zgoba et al. (2003) compared the reconviction rates over ten years for treated sex offenders from the Adult Diagnostic and Treatment Center (ADTC) in New Jersey, who were considered to be repetitive-

compulsive offenders, to sex offenders who served their sentence in the state's prison system. The authors found that sex offenders released from ADTC had significantly lower rates of non-sexual offenses than those released from state prisons. However, the authors found no significant difference in the sexual recidivism of these two groups after ten years, although the rates were low overall (9% for treated versus 13% for untreated). Likewise, an evaluation of treatment in Canada's federal correctional system by Quinsey et al. (1998) used survival analysis to compare sexual and violent recidivism rates of various groups of sex offenders. The authors found that the incarcerated individuals who were treated committed new sex offenses at the highest rate compared to those who did not require treatment or refused. After controlling for risk to re-offend, Quinsey et al. (1998) found that treated offenders were still more likely to commit sexual crimes but less likely to commit new violent offenses. Zgoba and Simon (2005) also found that treatment could have an impact on non-sexual re-offending. The authors found no significant differences between the non-treated and treated sex offenders on future sex offending, but about 12% of the treated sex offenders had a reconviction for a non-sexual offense versus nearly 27% of the general population. These studies suggest that when the goal of treatment is to reduce sexual re-offending, then there may some question as to whether it is truly effective. However, the findings show that something else can be gained from treatment that can have a positive effect on the risk for any future offending.

Treatment specific to relapse prevention has also been found to be effective in improving coping strategies for sex offenders (Serran et al., 2007). Using self-report data, these authors found that non-familial child molesters had better coping skills after receiving treatment than those who had not received treatment and were on a waitlist.

Colton et al. (2009) also conducted in-depth interviews with thirty-five child sex offenders in the UK regarding the treatment they received in prison. When asked what was helpful about their treatment, about 57% addressed an increase in victim awareness and empathy, about 45% noted their understanding of why they had offended, and about 40% identified relapse prevention.

Despite the positive findings thus far that show, overall, psychiatric treatment is effective in reducing recidivism, other research has found no impact on outcomes between treated and untreated sex offenders. For instance, in a comparison of sex offenders in Washington State who received in-prison treatment to those that were willing to participate but did not receive treatment, there were no statistically significant differences found between the two groups on general recidivism, and the treatment group actually had higher levels of sexual recidivism rates during the five-year follow-up period (Barnoski, 2006). Marques et al. (2005) also assessed treatment effectiveness for sex offenders as part of the California Sex Offender Treatment and Evaluation Project (SOTEP), which was operated from 1985-1995. Marques et al.'s (2005) study was an experimental design in which three groups of male inmates serving time for rape or child molestation, who agreed to participate, were randomly assigned to either the treatment group or a volunteer control group encompassing individuals willing to participate but not selected for treatment. A third group, those that did not want to participate in treatment, were identified and comprised a non-volunteer control group. The evaluation was a prospective longitudinal panel design and initially consisted of 704 offenders: 259 assigned to treatment, 225 in the volunteer control group, and 220 in the non-volunteer group. By the end of the study period, only 167 offenders from the treatment group

remained; there was no drop-out in the other two groups. The treatment group was moved to a hospital whereas the other two control groups remained in prison. Overall, the authors found no significant differences in the violent and sexual re-offending between the three groups. However, some in-treatment differences were found; offenders who met the treatment goals had lower re-offending rates than other groups. The randomization used in the Marques et al. (2005) study is a critical piece in evaluating sex offender treatment, but it is one that cannot be commonly utilized due to incarcerated individuals already being placed in programs.

Different treatment models have been evaluated over time (e.g. Hanson et al., 2002; Lösel and Schmucker, 2005), and the findings measuring the effectiveness of treatment through recidivism rates have been mixed. This may be due to the type of treatment model being evaluated, as there is variation. Additionally, some of the factors affecting the outcome may be related to how individuals are selected for treatment and the environment in which treatment is occurring. Motivation and choice in treatment are issues that have not been well understood, and these are critical factors when assessing treatment effectiveness.

Concerns with Measures of Treatment Effectiveness

There are a number of factors to consider when evaluating the effectiveness of treatment on future offending. There are both practical and ethical challenges related to treatment delivery as well as issues related to the nature and voluntariness of treatment. Practically-speaking, randomized control trials studying treatment impact on recidivism are often not possible (Marques et al., 2005). Furthermore, Marshall and Marshall (2007) suggest that randomized control trials studying recidivism for individuals with sex

offenses may not be ethical when treatment is delayed to one group of individuals, especially if it takes many years before determining the effectiveness on recidivism. As a result, research often compares re-offending between individuals who complete treatment to those that do not (e.g. Zgoba et al., 2003). However, there are concerns with the validity of the findings when treatment dropouts and refusals are not included in the treatment group and are instead considered as part of the control group (Larzelere, Kuhn, & Johnson, 2004).

There are also some potential important methodological concerns when assessing treatment success based on the motivation level of the individuals under study. For instance, some treatment programs for sex offenders do not take unmotivated participants or they may be quickly dropped if they refuse to cooperate or otherwise do not participate (Hanson, 1997). Voluntariness may have an impact in that those that wish to participate in treatment may be more willing to change already, thus improving the likelihood for success and reducing re-offending for reasons unrelated to treatment itself. These various issues underscore why there are continued calls by researchers to understand the role of motivation so that treatment can be most effective (Mann, Carter, & Wakeling, 2012; Parhar et al., 2008; Wormith et al., 2007), as well as to specifically consider how motivation impacts treatment for prison populations (Hiller et al., 2002).

Coerced treatment and motivational issues have been more thoroughly examined in studies on substance abuse treatment, including sanctions related to drug courts (Brecht, Anglin, Jung-Chi, 1993; Broner, Mayrl, & Landsberg, 2005; Cosden et al., 2005; Hiller et al., 2002; Prendergast et al., 2002; 2009; Whiteacre, 2007; Young & Belenko, 2002). Individuals in a drug court model receive treatment under a court-monitored

program rather than more traditional sanctions. The idea is that treatment will lead to a better outcome for the individual, and some research sustains this view. For example, Broner et al. (2005) compared individuals in two tracks of a substance abuse diversion program to those receiving traditional sanctions. Individuals who volunteered and qualified for diversion, defined as having a co-occurring mental illness and substance abuse, were approached for study inclusion. Those in mandated diversion had treatment participation requirements and sanctions for non-completion whereas those in non-mandated diversion did not have requirements for participation in treatment or other supports. Broner et al. (2005) found that individuals in mandated diversion with treatment expectations spent fewer days in prison and had less drug use than both the non-mandated group and the comparison group during a twelve month follow-up period. Drug courts and diversion programs are becoming more common, suggesting that external pressure to participate is an acceptable and reasonable model within the criminal justice system.

Of related importance is evaluating treatment impact based on various levels of participation. Differences may be uncovered when considering treatment dosage. For example, Huebner and Cobbina (2007) assessed recidivism among a large sample of individuals who were on probation over a four-year period. The authors compared four groups, and probationers that dropped out of treatment were separated out to consider the unique needs of those that fail to complete drug treatment. Using various indices, the authors found that the individuals who entered treatment but did not complete it had the highest rates of failure when measured through future arrest, and their time to failure was much quicker when measured using survival analysis. Individuals that went through the full treatment had similar outcomes to the reference category, which was comprised of

probationers that did not report drug use and did not receive treatment. An important implication from this study was that fully completing treatment was critical to affecting future offending, and recidivism rates were not impacted in a meaningful way for those who failed to complete treatment. Differences were observable by teasing out these groups. Individuals who volunteer for treatment may be very different from those that refuse to participate, and these groups may vary from those that attempt treatment, even if they are not ultimately successful. These various factors may impact treatment participation, so it is advantageous to break out participants into multiple groups to evaluate treatment effectiveness.

Studies have also begun assessing the role of motivation and coercion specific to those who have been convicted of a sexual offense. Jones, Pelissier, and Klein-Saffran (2006) found that motivation played a significant role in predicting who volunteers for sex offender treatment and subsequently enters. Specifically, the authors found that treatment volunteers were more likely to receive treatment, had participated in treatment before, had higher levels of motivation to change their sexually deviant behavior, and had lower substance use as compared to non-volunteers. It would be important to improve buy-in to the treatment being offered even if individuals are mandated. Sex offenders interviewed as part of a study by Colton et al. (2009) commented that they wanted to be more actively involved in their treatment. Connor (1996) also suggests that there needs to be a reciprocal relationship between the individual and the therapist for treatment to be successful. There can be a collaborative approach in which the individual being treated takes an active role. This is one way that an individual can be invested in treatment if it is not voluntary as well as be accountable for the success of treatment.

Research also suggests that sex offenders in denial may be motivated to engage in treatment if they feel their needs, rights as human beings, and interests are being taken into account (Ward, Gannon, & Birgden, 2007). Taking this more holistic approach can be further incorporated into the way we think about sex offender treatment. Addressing aspects like hope and self-esteem provide “a powerful way of motivating offenders to engage in therapy” (Ward & Marshall, 2004: 164). To be sure, Mann et al.’s (2004) research on therapists’ ratings of sex offenders in treatment found that those who were involved in approach-oriented interventions, where future goals and actions were acknowledged, were more likely to be genuinely motivated to not re-offend as opposed to a group whose interventions were focused solely on avoiding relapse. Although the main purpose of sex offender treatment is the prevention of re-offending, there are different ways to obtain this goal. Finding ways to actively engage the individual to buy-in to the process can be an important contribution to the success of treatment.

It is also helpful to understand that motivation can fluctuate when discussing the impact of coerced treatment. Polaschek and Ross (2010: 109) found that initial motivation in treatment did not predict behavioral outcomes among high-risk violent prisoners participating in CBT, suggesting that “treatment does not need to be restricted to those that are well-motivated at the start, and can be offered to high risk clients.” Beggs and Grace (2011), who focused their research on adult sex offenders with child victims, found that treatment targeting dynamic risk factors, including motivation to change behavior, led to a reduction in sexual recidivism over time. As these examples highlight, intervention strategies can take into account those that are not initially

motivated to change and still create a lasting impact. Consideration should therefore be given to individuals who are reluctant to participate.

Research supports there is reason to be cautiously optimistic that treatment can lead to reduced recidivism among individuals with sex offenses (Przybylski, 2014b). Assessing the role of coercion and motivation for this population has been a relatively new advent to the criminology field, and there is still much to be understood when incarcerated individuals are mandated to participate in treatment. Further research can add to our knowledge about the role of treatment as well as its impact on individuals based on their type of offense.

CONCLUSION

There is a perception that sex offenders are more dangerous than other types of offenders (Sample & Bray, 2003), which has led to specific expectations being placed on them. The goal of these interventions is for incarcerated individuals with sex offenses to be managed in a way that protects public safety and minimizes the risk of future offending. There is still much to learn about risk and re-offending among this population. The base rate is already low, but treatment appears to make some additional difference over time. Most studies measuring recidivism cover a short follow-up period (e.g. Hanson et al., 2002). A better understanding of long-term risk is needed. The rates may vary when accounting for a longer period of time. The current study attempts to bridge this gap by considering the long-term recidivism rates among incarcerated individuals convicted for different types of sex offenses. This includes appreciating the impact of varying levels of treatment participation on the outcome, as there may be unique differences based on those that successfully complete treatment, refuse, or receive only

some treatment. Teasing out these differences can help us better recognize what works and for whom it works.

CHAPTER 3: CURRENT STUDY

This dissertation focuses on the role of sex offender treatment on long-term recidivism rates among a sample of individuals incarcerated in Missouri. In 1980, legislation was passed that required the Missouri Department of Corrections (DOC) to

“develop a program of treatment, education and rehabilitation for all imprisoned offenders who are serving sentences for sexual assault offenses” with the ultimate goal of preventing future sexual assaults by those in the program (Revised Statutes of Missouri [RSMo] 589.040). Part of the 1991 version of the statute was the requirement that all imprisoned individuals convicted of sexual assault offenses successfully complete the program (RSMo 589.040). In 2011, the statute more clearly spelled out that successful program completion had to occur prior to being eligible for parole or conditional release. The program created in response to the statute was the Missouri Sex Offender Program (MOSOP). A formal program evaluation has not been conducted, but internal univariate analysis from the DOC indicates that the program has been effective at reducing recidivism among this population (Lombardi, 2015). Because the treatment program is statutorily mandated for individuals convicted of sexual assault offenses, it is critical to understand the treatment offered and its impact. Learning more about the program and whether it is effective adds to our knowledge about what works for this population. Additionally, if the program is effective, then it reinforces criminal justice policy promoting treatment of this kind within the prison environment.

To lay out my study design, this chapter will proceed as follows. First, I will provide a background on the MOSOP to include the different treatment phases and the components of completion or termination. Then, I will outline my specific research questions and identify the data used to address these questions. The specific measures to be used in the study will be described and descriptive findings outlined. The chapter will end with the analytic plan.

PROGRAM BACKGROUND

Study State

Missouri offers a number of unique features that make it an ideal study site. As noted above, Missouri passed legislation specifying treatment expectations in prison for individuals convicted of sexual assault offenses. The MOSOP has not been extensively studied, and there has been no outcome evaluation of the program to date. Missouri is also a Sex Offender Registration and Notification Act (SORNA) compliant state. SORNA establishes minimum guidelines for states regarding the notification and registration of sex offenders. As of 2016, Missouri was only one of seventeen states deemed by the Department of Justice to have substantially implemented the SORNA requirements (Harris & Lobanov-Rostovsky, 2016).

Individuals convicted of sexual offenses in Missouri make up a relatively small portion of the inmate population. In 2010, violent offenders in Missouri comprised the largest inmate population (39.2%), followed by nonviolent (23.2%), drug (16.9%), sex (16.7%), and DWI (4.1%) (Lombardi, 2010). This research also provides statistics on the overall re-offending among the different groups of incarcerated individuals at six months, and then one, two, three, and five years post-release from prison. Individuals convicted of a nonviolent offense had the highest percentage of first returns to prison when assessed after five years (62.7%). Individuals convicted of sex and child abuse offenses had the lowest first return to prison (30.5%). After five years, nonviolent offenders also had the most new convictions post-release (31.5%), followed by DWI (27.2%), drug (25.3%), violent (22.4%), and sex/child abuse (13.4%). These trends were consistent for each time interval measuring recidivism rates. As this report shows, individuals with a conviction for sexual offenses had the lowest rates of recidivism compared to other groups.

More recent data from the Missouri DOC show that as of mid-year 2014, individuals convicted for a sexual offense comprised approximately 15% of all incarcerated individuals in the state (Lombardi, 2015). This is equal to 4,726 sex offenders, and 567 sex offenders were released during the review period (Lombardi, 2015). Females represent a very small portion of the sex offender population in Missouri (n=134). Individuals convicted of sexual assault offenses in Missouri are required to participate in the MOSOP before being eligible for release for their sex offense. It is this population and the treatment program in particular that the present study will address.

Program Model

The MOSOP program takes a cognitive-behavioral treatment (CBT) approach with an emphasis in relapse prevention. The overall goal of MOSOP is for participants to understand the processes that led to their sexual offending and then teach alternative coping mechanisms to reduce the likelihood of re-offending in the future. The program is comprised of three separate phases: I, II, and III. The first two phases occur within the prison environment and are the focus of the present study. The third phase is a post-release/community-based program, and it is outside the scope of the project.³ The MOSOP operates primarily out of the Farmington Correctional Center (FCC). The individuals participating in the program are housed within a therapeutic community (TC) environment within the correctional setting. The housing unit is comprised of five wings that can each house up to sixty men. Males that are part of the program and in protective custody and/or have physical needs may receive services in a prison in Bonne Terre. These men remain in general population while receiving treatment. MOSOP participants

³ Additionally, participation in community sex offender treatment programs after release from prison are not tracked by the DOC.

with serious illness may receive services in Moberly. Female sex offenders receive MOSOP services at the Eastern Reception and Diagnostic Center in Vandalia (personal communication with the MOSOP Clinical Coordinator, 10/10/14).

Incarcerated individuals who complete treatment are eligible for release by their first parole date.⁴ Those that are released are on conditional release or parole for the remainder of their sentence.⁵ Individuals that do not complete treatment are required to serve their entire prison sentence for the sex offense and are not eligible for parole. Current DOC policy requires that individuals admit to their sex offense for which they are incarcerated before being allowed to participate in the program. As previously noted, this view is controversial in that emerging research indicates that admission of a sex offense is not a predictor of re-offending (Hanson & Morton-Bourgon, 2005). Data from the Missouri DOC indicate that in fiscal year (FY) 2013, approximately 87% of eligible sex offenders were enrolled in the MOSOP, and approximately 62% completed the program (MO DOC Strategic Plan Fiscal Year 2014-2015).

Phase I

The first phase of the MOSOP is an assessment and evaluation process, and it lasts approximately ninety days. The goal of this process is to conduct psychological testing as well as orient the individual on the expectations of treatment within the

⁴ Missouri has indeterminate sentencing. The prison sentence is a range, and a parole board determines when an individual can be released based upon the inmate's conduct.

⁵ Parole board policy has been to release sex offenders who complete the MOSOP on or a little before the conditional release date and to release individuals who fail or refuse MOSOP on the sentence completion date for the sex offense. In the early 1990s, before Missouri's truth in sentencing act in 1994, sex offenders who completed MOSOP were released on about 50% of sentence and offenders who failed or refused MOSOP were released on the conditional release date at 66% of sentence. After 1994, the board has become increasingly conservative in time served, both for offenders who complete MOSOP and those who do not (personal correspondence with DOC representative, 09/29/14). Additional analysis related to percentage of time served can be found at the end of the chapter.

program. A psychometrist is responsible for the assessment during Phase I of the program. Each qualifying individual has an independent clinical interview to discuss the program before he/she decides to commit to participating. The interview allows the individual to learn about the general program expectations and address rumors that they have heard from other prisoners about the program. By providing detailed information on the front-end, the hope is that the individuals are more willing and more prepared to enter the treatment program. The interview duration is approximately one hour in length.

Additionally, several actuarial assessments are completed before beginning the treatment phase. Currently, these include the Static-99R (Helmus et al., 2012), Stable-2007 (Hanson et al., 2007), Hare's Psychopathy Checklist – Screening Version (PCL-SV; Hart, Cox, & Hare, 1995), personality testing, and a pedophilic interests survey for offenders with victims aged thirteen or under (the Screening Scale for Pedophilic Interests, or SSPI; Seto & Lalumière, 2001). For female sex offenders and male offenders that have no identifiable victim (e.g. an individual convicted of child pornography), the Stable and Static tests are not scored. These assessments are not validated for these populations. Rather, the assessments are used to provide some information about the types of goals that could be addressed in treatment. The SSPI addresses four questions: whether the offender has a male victim, more than one victim, has a victim younger than eleven, and has a victim that was unrelated. The SSPI has been validated to identify specific interests among child molesters better than chance, and it is a reasonable alternative to be used in lieu of phallometric testing (Seto & Lalumière, 2001). The actuarial assessments are based on information obtained from the incarcerated individual's file and on-site interview. Treatment begins within a fixed timeline, which is

based on the earliest presumptive release date for the inmate. Individuals have to finish Phase I prior to being eligible to participate in the actual treatment, which is Phase II. The second phase of treatment typically begins within about a month after completing the first phase.

Phase II

The second phase of the MOSOP is the actual treatment phase, and it is between nine to twelve months in length. The treatment emphasis is a cognitive-behavioral approach in which individuals take responsibility for their actions, develop various social and problem-solving skills, and restructure their thinking to avoid re-offending. The second phase is comprised completely of group treatment, and it occurs in a therapeutic community (TC). The overall benefit of group treatment within a TC environment is that individuals hold one another accountable for their actions, beliefs, and behaviors within the program. Research supports that the TC model is very effective with various offending populations (De Leon, 2000; Inciardi et al., 2004; Ware et al., 2010; Young & Belenko, 2002). Group therapy is a common part of sex offender treatment modalities, though some programs offer or supplement group with one-to-one treatment. Group treatment can be valuable in that these individuals can share and challenge one another's beliefs. The group can act as the positive environment, which can promote internal motivation. In their in-depth interviews with individuals convicted of child molestation, Colton et al. (2009: 329) found, "Membership of a group signifies an offender's acknowledgement of the need to change and other group members are able to challenge distorted thinking..." It has also been suggested that group treatment is more common than individual treatment because of resources (Stinson & Becker, 2013). It is more time

and cost effective than individual therapy, and there may not be sufficient staff to offer one-to-one support.

At the program at FCC, participants are supported by both correctional and treatment staff. Each wing within the MOSOP is self-contained, meaning that all activities are isolated to that designated area. The men have one communal living area filled with bunks on each wing. There is also one group area and a recreation/leisure type area. Treatment participants are limited in what they can have in their possession within the program, and there are more restrictions than what other incarcerated individuals are allowed in general population. Their belongings are confined to what can fit within a foot locker. Outside breaks are offered on a routine basis throughout the day. There is one therapist assigned to each wing, and there is a minimum of one correctional officer on each floor of the housing unit during each shift. The treatment staff are contracted staff and are not part of the DOC staff. The individuals receive approximately fifteen direct contact hours per week from treatment staff. This includes six to seven hours of direct group. Each group is comprised of about twelve to fifteen men. The specific curriculum is decided upon by the therapist, and the therapist is responsible to ensure that the individuals cover all the treatment modules. Group includes psycho-education based on four areas: communication and boundaries, healthy relationships and sexuality, emotional management, and criminological thinking. About three hours per week are spent in a study hall-like environment in which a therapist is available to address questions and/or matters that have come up in group. One hour a week is spent in a community meeting. This generally covers issues within the wing.

Additionally, participants meet face-to-face with the treatment team, which is comprised of the Clinical Coordinator, Correctional Case Worker, and a therapist. Outside of the groups that are part of the MOSOP, individuals can also participate in other prison-related activities and groups similar to other incarcerated populations (e.g. Alcoholics Anonymous/Narcotics Anonymous, education, and religious groups). These often take place in the evenings and weekends with MOSOP-specific activities occurring during the days.

Relapse prevention has been a key part of the treatment at the MOSOP. Components of this model include tactics for avoidance and/or coping strategies when there are situations that could be deemed risky for an individual (Kirsch & Becker, 2006). Victim empathy has also been coupled with this process. More recently, the good lives model (GLM; Ward, 2002) is emerging as a major focus of treatment in the program.⁶ The GLM approach emphasizes enhancing an individual's overall well-being, which leads to change throughout the person's whole life. Motivational interviewing (MI; Miller & Rollnick, 1991) is used as a tool in treatment if an individual's motivation is low. MI helps promote 'why' an individual should change his behavior, and it is based on the person's current state of mind. At the time of the study, the actuarial assessments in the MOSOP are a means to obtain some background about the individual and are not used to differentiate treatment. Currently, the treatment is the same for all participants, and it is not split out based on the individual's level of risk. This may be a future aim of the MOSOP program (personal communication with the MOSOP Clinical Coordinator, 10/10/14).

⁶ Utilizing GLM is a more recent advent to the treatment program. The main focus of treatment during the time period under study was related to cognitive-behavioral therapy and relapse prevention.

The inmates participate in a number of stages during the course of treatment. The individuals first go through a sexual victim disclosure and also identify previously undisclosed acts/offenses. Then they complete a brief social history. The individuals complete an autobiography about halfway through the program. As treatment wraps up, the inmates provide a case report about their incarcerating offense, addressing thinking errors, risk factors, and behaviors; make a relapse prevention plan; and then consider their behavior from the perspective of the victim. If an individual successfully completes the MOSOP program but has not been released for some reason (e.g. they have finished before their first date and/or do not get parole as of their first date), then they go back to general population from the TC environment. Participants complete post-testing in areas like general programmatic knowledge and offending beliefs upon successful completion of the program, and the Stable is re-administered to measure any changes in attitudinal and dynamic risk factors.

Program Completion/Termination

The treatment participants can be terminated from the program for multiple reasons. The most straightforward way is through a prison conduct violation. Termination is determined by correctional staff based on the nature of the offense. If an individual is removed in this manner, they are placed outside the TC. Thus, they are physically unable to be part of the treatment milieu. Within the treatment program, individuals can also be terminated if they engage in various inappropriate behaviors, like make threats, fight, have sexually inappropriate behavior, and for non-participation in treatment, among others. In these scenarios, a report is made by the therapist and reviewed by the treatment team. This committee determines the consequence for the individual.

The incarcerated individuals that qualify for the MOSOP have two chances to complete the program. Those that refuse to participate prior to Phase I remain in general population and serve their full sentence. This group never comes into contact with treatment through the MOSOP. Within Phase I, an individual can begin the assessment process and then decide that they do not wish to participate. After some time in which to reflect, they are asked again if they wish to participate. If they say no, then they have exhausted their first opportunity. In this scenario, an individual can re-enlist to participate in the program at a later time, but there is no guarantee. If the individual is terminated during the first phase of the program, then they have lost their first opportunity at program completion. It is much harder for the individual to have a second chance to participate in MOSOP. If the individual leaves but wishes to return later then his name is added to the waitlist, which also includes all other Phase I participants waiting to be placed in the treatment program.

Due to space limits and the length of the waitlist, an individual who leaves during Phase II rarely ever has the chance to return to the program. Participants can choose to voluntarily remove themselves from the program at anytime. In this scenario, the treatment team also meets with the individual and explains the consequences for leaving ahead of schedule. Essentially, leaving in this manner means an individual will serve his maximum sentence. When an individual is at risk of leaving the program due to non-participation or for some type of program violation, the treatment team meets with him to discuss this reality. The team may serve as a “wake-up call” for the person that his participation in the program could be in jeopardy (personal communication with MOSOP Clinical Coordinator, 10/10/14). Usually an individual is given a few chances before he is

ultimately terminated for treatment-related behavior. Ultimately, those that fail or refuse treatment serve out their entire sentence required for the sex offense in which they were incarcerated.

QUESTIONS

The overarching goal of this study is to understand the role of the MOSOP treatment individuals incarcerated for sexual assault offenses and its impact on recidivism over time. The dissertation focuses on two main research questions: What are the differences between sex offenders who complete treatment the first time through, go through treatment multiple times or fail, or refuse treatment? What is the overall rate of recidivism between sex offenders who complete treatment and those that do not? These questions will further be broken down to fully understand the characteristics among these different groups, including a description of the individuals that do not participate, those that try, and those that complete treatment; predicting who completes treatment versus who does not; ascertaining who and why individuals choose to not finish treatment; and teasing out factors affecting voluntariness for treatment to the extent possible with the available data.

DATA

To address the research questions, the data are gathered from official Missouri DOC records. The inclusion criteria for the study are: The individual must have 1) been convicted of a felony sex assault offense, 2) been incarcerated with the Missouri DOC and was eligible to participate in MOSOP, and 3) been released from prison between 1991 and 2010. RSMo 589.015 defines sexual assault as the following:

- (a) The acts of rape in the first or second degree, forcible rape, rape, statutory rape in the first degree, statutory rape in the second degree, sexual assault, sodomy in

the first or second degree, forcible sodomy, sodomy, statutory sodomy in the first degree, statutory sodomy in the second degree, child molestation in the first degree, child molestation in the second degree, deviate sexual assault, sexual misconduct and sexual abuse, or attempts to commit any of the aforesaid, as these acts are defined in chapter 566⁷;

(b) The act of incest, as this act is defined in section 568.020⁸;

(c) The act of abuse of a child, as defined in subdivision (1) of subsection 1 of section 568.060, which involves sexual contact, and as defined in subdivision (2)⁹ of subsection 1 of section 568.060;

(d) The act of use of a child in a sexual performance as defined in section 568.080¹⁰; and

(e) The act of enticement of a child, as defined in section 566.151¹¹, or any attempt to commit such act.

This study uses an all male sample that captures 7,193 sex offenders during the time period.¹² The period from 1991-2010 was selected because, in 1990, there was a law change that required those incarcerated for sexual assault offenses to participate in the

⁷ 566.010. (1) "Deviate sexual intercourse", any act involving the genitals of one person and the hand, mouth, tongue, or anus of another person or a sexual act involving penetration, however slight, of the male or female sex organ or the anus by a finger, instrument or object done for the purpose of arousing or gratifying the sexual desire of any person or for the purpose of terrorizing the victim; (2) "Sexual conduct", sexual intercourse, deviate sexual intercourse or sexual contact; (3) "Sexual contact", any touching of another person with the genitals or any touching of the genitals or anus of another person, or the breast of a female person, or such touching through the clothing, for the purpose of arousing or gratifying sexual desire of any person; (4) "Sexual intercourse", any penetration, however slight, of the female sex organ by the male sex organ, whether or not an emission results.

⁸ 568.020. 1. A person commits the offense of incest if he or she marries or purports to marry or engages in sexual intercourse or deviate sexual intercourse with a person he or she knows to be, without regard to legitimacy, his or her: (1) Ancestor or descendant by blood or adoption; or (2) Stepchild, while the marriage creating that relationship exists; or (3) Brother or sister of the whole or half-blood; or (4) Uncle, aunt, nephew or niece of the whole blood.

⁹ 568.060. 1. As used in this section, the following terms shall mean: (1) "Abuse", the infliction of physical, sexual, or mental injury against a child by any person eighteen years of age or older. For purposes of this section, abuse shall not include injury inflicted on a child by accidental means by a person with care, custody, or control of the child, or discipline of a child by a person with care, custody, or control of the child, including spanking, in a reasonable manner; (2) "Abusive head trauma", a serious physical injury to the head or brain caused by any means, including but not limited to shaking, jerking, pushing, pulling, slamming, hitting, or kicking;...

¹⁰ 568.080. 1. A person commits the crime of use of a child in a sexual performance if, knowing the character and content thereof, the person employs, authorizes, or induces a child less than seventeen years of age to engage in a sexual performance or, being a parent, legal guardian, or custodian of such child, consents to the participation by such child in such sexual performance.

¹¹ 566.151. 1. A person twenty-one years of age or older commits the offense of enticement of a child if he or she persuades, solicits, coaxes, entices, or lures whether by words, actions or through communication via the internet or any electronic communication, any person who is less than fifteen years of age for the purpose of engaging in sexual conduct.

¹² There was not a sufficient number of females (n=133) in which to provide a meaningful analysis on group differences among those completing/failing/refusing sex offender treatment. Therefore, females are excluded from the present analysis.

MOSOP program prior to release from prison. Individuals in the program prior to that time may have been subjected to different expectations than the current population. Data on recidivism, which includes reconviction, returns to prison, and technical violations, were gathered from official DOC data through September 2014.

This study is the only outcome evaluation of the MOSOP known to date. Internal DOC records indicate differences in the recidivism rates between individuals who complete treatment and those that do not, but a detailed analysis has not been conducted. Additionally, this study utilizes a large sample size and covers an extended period of time in which to evaluate long-term recidivism. Other studies assessing a similar population have typically had smaller available samples and included shorter follow-up periods (e.g. Marques et al., 2005; McGrath et al., 2003; Zgoba et al., 2003). A more accurate picture of recidivism may be able to be captured by using a longer time period, especially since there is already a low base rate of re-offending among this population.

MEASURES

Dependent Variable

The dependent variable is a measure of recidivism among a group of individuals convicted of sexual assault offenses and released between 1991 and 2010. Recidivism is measured through September 2014, which provides a four to approximately twenty-four year follow-up period. Recidivism is a dichotomous measure, and *reconviction for any offense* (0=no reconviction, 1=reconviction), *reconviction for a sex offense* (0=no reconviction, 1=reconviction), and *return to prison* (0=no return, 1=return to prison) are evaluated. The present study utilizes both reconviction and a return to prison as measures of recidivism to strengthen the analysis. New convictions can be used to assess individual

behavior. A return to prison, which can include a return for a technical violation, accounts for official responses to behavior. The use of multiple definitions of recidivism is a way to make the outcome more meaningful (King & Elderbroom, 2014). Based on the full sample size, about 28% of the population had a new conviction; of that group, approximately 6% had a new conviction for a sexual offense. Approximately 40% had a return to prison for a new offense or technical violation.¹³

The goal of the MOSOP is the reduction of future sexual assault offenses; therefore, the analysis separates out the type of recidivism as a sexual or non-sexual offense. This also helps build our knowledge about whether sex offenders, if re-offending, repeat the same type of offense or commit a different type. Research also supports that recidivism rates vary between individuals with adult versus child victims, with the latter needing to be tracked for over twenty years to best capture true re-offending among this specific group (Prentky & Lee, 2007). Thus, it is important to consider the time to recidivism.

Independent Variables

The independent variables include demographics, prior criminal history, and the characteristics of the incarcerated sex offense (hereafter criterion offense). Demographic variables include *race* (0=white, 1=non-white), *age at time of incarceration*, and *age at time of release* (range 14-102).¹⁴ A measure of relationship status was also included.

¹³ The data provided by MODOC merge prison returns due to a technical violation and a new offense. It was not possible to separate the reason for return to prison with the available data.

¹⁴ Individuals who had an incarceration age of less than twelve-years-old were not included in the analysis (n=10). This age was selected because, in accordance with RSMo 211.071 (retrieved 05/15/15), individuals aged twelve and older who committed an offense that could be considered a felony can be tried as an adult. The range for this variable is 12-97. Likewise, individuals who were twelve at release were not included in the analysis (n=1).

Relationship status was initially comprised of nine categories in the data¹⁵, but this was collapsed into a dichotomous variable to indicate whether the individual was *married* (0=not married, 1=married). Research indicates that relationships can impact an individual's ability or likelihood to offend (King, Massoglia, & Macmillan, 2007; Laub & Sampson, 2003; Sampson & Laub, 1993; Visher et al., 2009), and research specific to sex offenders suggests that individuals that are not married are at a higher risk to re-offend (Hanson & Bussière, 1998).

The official records provide historical information for each individual to indicate their level of need or risk while incarcerated. This information is obtained by the DOC upon intake of the individual to prison. Available data include educational, medical, mental health, substance use, and custody risk needs; these were represented on a scale (1-5) indicating low to high need. Overall, a score of 3 or above indicates that an individual has additional needs and/or requires added supports while incarcerated. A score of 3+ on the medical needs scale denotes that the individual requires at least daily nursing support. A higher score on the mental health needs scale identifies individuals with mild to serious functional impairment. The substance abuse classification assessment (SACA) score is used to identify whether an individual requires treatment; higher scores indicate moderate to severe/chronic substance use issues in which short to long-term treatment is required. Custody/risk scores are based on length of sentence and institutional behavior, which also accounts for adjustment to the prison environment. Higher scores for individuals incarcerated for sex offenses may also indicate they have not completed the MOSOP. High scores on the various needs scales may also render an

¹⁵ The categories included married, divorced and remarried, cohabitating, common law marriage, separated, divorced, never married, widowed, or unknown. Married and divorced and remarried comprise the married variable; all others are coded as not married.

individual unable to participate in certain activities. The level of need can serve as a proxy measure related to the individual's background, with higher scores indicating more support is required for the individual. A dichotomous measure was created for each *need* (0=no/low need, 1=medium/high need).¹⁶ *Number of prior prison sentences* is also included as continuous variable to assess criminal history; the range is 0-64.

Multiple variables related to the individual's incarceration are addressed in the analysis, including plea, time served, and institutional behavior. How the individual pled to the sex offense charge may serve as an indicator for attitudes toward offending and the likelihood of re-offending. Someone who feels bad about their offending (avoidant vs. approach) may be more motivated from the outset to not re-offend and/or may be more willing to participate in treatment.¹⁷ It may also represent an individual who is more willing to admit to the crime. *Plea type* initially included three categories but was collapsed into a dichotomous measure (0=guilty/Alford plea, 1=found guilty). *Time served in months* is a continuous variable; the range is 0-432 months.

The criterion offense is also used to separate the sex offense based on victim type in which to make comparisons: those that have a child victim versus adult victim.¹⁸

¹⁶ The education variable was reverse coded, as a 1 indicated a high school diploma (HS) or equivalent (GED) and a score of 2-5 indicated less than HS; therefore in the analysis (0=less than HS/GED, 1=HS graduate). According to the DOC, an individual must have a HS diploma or GED to be eligible for parole and to participate in vocational services. This variable represents a 'need' only if the individual did not have a HS diploma or equivalent.

¹⁷ An Alford plea is made when the defendant does not admit guilt but acknowledges that there may be sufficient evidence by the prosecution to support the charge. Making a guilty or Alford plea may also indicate accepting a lesser sex offense charge that could mean a shorter sentence than the original criminal act could have carried. Regardless of purpose, examining the relationship between plea, treatment participation, and re-offending may offer some insight into motivation, at least to the extent possible through official records. Plea type has been found to be a predictor of treatment compliance among incarcerated male sex offenders (Clegg et al., 2011).

¹⁸ There was not a sufficient sample size of individuals convicted of enticement, exploitation, or sexual performance in which to create a third group on non-contact sexual offenders for comparison purposes (n=72). As a result, these individuals were split into one of the two existing groups based on the age of the

Levels of offending may vary among sex offenders, as research supports within-group differences (Polaschek, Ward, & Hudson, 1997). Other evidence also suggests that differences in re-offending can be seen more clearly when breaking out the type of offense based on victim (Lussier, 2005; Lussier & Cale, 2013; Lussier et al., 2007; Sample & Bray, 2006). It is also meaningful to split out victim preference when assessing the role of treatment. Przybylski (2014b) identified that there is a need to build a stronger evidence base on differential impact of treatment based on different types of sex offenders. *Victim type* was created for the analysis in which a child victim was defined as an individual fourteen years or younger; an adult victim was defined as being fifteen years or older (0=adult victim, 1=child victim). These definitions are similar to others found in the literature (e.g. Rice et al., 2006). Additionally, the age periods fit within the charge codes established through Missouri statutes.

Institutional behavior is important to consider since it may represent an individual's motivation to change if engaged in multiple programming opportunities during incarceration, and prison behavior can also affect release time since Missouri has indeterminate sentencing. Additional programming that is available can include drug treatment or cognitive therapy groups, among others; program participation ranges from 0-11 groups¹⁹. For analysis, *participation in program* was made into a dichotomous variable to capture participation versus non-participation for each treatment program

victim as supported by the charge code. Furthermore, the data did not further indicate relationship to the child victim (e.g. incest as the charge code), so analysis indicating victim type is based on age only.

¹⁹ A note about program location: Various groups/programming are offered at each of the prison sites, and individuals may complete this programming prior to the completion of MOSOP while serving time at another location (personal communication with DOC representative, 09/16/16). The vast majority of MOSOP participants complete their sex offender treatment at Farmington Correctional Center (FCC). Based on available information from the DOC, it can be surmised that over 90% of individuals completed their treatment at FCC and less than 10% completed the MOSOP at another prison location. Treatment location was not specified in the data provided.

(0=non-participation, 1=participation in one or more institutional treatment program). Major rule violations can indicate compliance within the prison environment, and it can also affect participation in the MOSOP. Examples of major rule violations include homicide, major assault, dangerous contraband, escape, riot, sexual assault, arson, and organized disobedience. *Major rule violation* was made into a dichotomous measure (0=no major rule violations, 1=1 or more violations).²⁰

Two additional variables were included to address factors associated with the individual's release from prison. A dichotomous measure was added to account for the individual's *release type* (0=release to supervision, 1=institutional discharge) as a way to show whether the individual was still under supervision upon release. Individuals released to supervision were still under monitoring by the DOC until they completed their sentence for the sexual assault offense. Those institutionally discharged served their max sentence and were under no further monitoring. Per RSMo 589.400, individuals incarcerated for sexual offenses and released on or after January 1, 1995, had to comply with state registration requirements in which they had to register as a sex offender for the remainder of their lifetime. Anyone released prior to this date was exempt and did not have to register as a sex offender upon release from prison. Thus, there could be a question of whether any type of notification/registration requirement may impact the decision to participate in treatment, as that could affect an individual's time before

²⁰ Rule violations was another variable available to address institutional behavior, and it included behaviors like assault, sexual misconduct, having contraband, making threats, possessing or using an intoxicating substance, fighting, and safety violations. This variable was found to be statistically significant in some of the models that were run, but it was not substantively significant. Therefore, only major rule violations is addressed, as it can result in a period of segregation and possibly a transfer to a higher custody institution (personal communication with DOC representative, 09/12/16). The range for major rule violations was 0-32, with 91.2% having no violations and 8.8% having more than one. Only one individual had 32 major rule violations.

release. As a result, a dummy variable was created for *release date* (0=pre-1995, 1=1995 or after). There were 1,244 individuals (or 17.3%) released prior to 01/01/95, and 5,949 (or 82.7%) were released on or after this date.

Treatment Participation

Key to the present study is assessing the level of treatment participation among the incarcerated individuals with access to the MOSOP. Research typically compares treatment-completers to individuals that dropout, refuse, and/or do not otherwise participate (e.g. Hanson et al., 2002). This does not account for the potential differences in those incarcerated who start and then dropout or are terminated from the program versus those that are not motivated at the start. Individuals who attempt treatment receive some dose of the program, even if they are not ultimately successful. It is unclear whether treatment dosage could impact recidivism. If it does, then it will be helpful to ascertain to what extent. Extant research suggests there may be critical differences in the recidivism rates of individuals who fail to complete drug treatment (Huebner & Cobbina, 2007), but there may be some positive impact among individuals with sex offenses that are part of an intent-to-treat group (Olver et al., 2009). Therefore, the present analysis includes three categories based on *treatment participation*: those that complete treatment the first time through (completers), those that do not participate (refusals), and those that attempt multiple times and/or fail (attempters). In Phase II of treatment, 3,323 are noted as completers, 2,158 are in the refusal category, and 1,712 are attempters.²¹ All analysis is

²¹ The data indicate that six incarcerated individuals attempted the second phase of the MOSOP program for a third time, and one person attempted a fourth time. It is not clear how these individuals had additional access, as the practice is for qualifying participants to only receive two opportunities at program completion (personal communication with the MOSOP Clinical Coordinator, 10/10/14). Also, it is understood that a small number of those in the attempter group will ultimately be successful in completing treatment during a subsequent attempt and eligible for release before the end of their sentence for the sexual assault offense (n=180). Ultimately, three groups were utilized as I was most interested in discerning the

based on Phase II of treatment participation since that is the actual delivery of treatment to an individual.

ANALYTIC PLAN

The analysis addresses two main areas of interest: group differences based on the three categories of treatment participation and recidivism over time among these individuals. The focus will be on participation in Phase II of the program, which is delivery of treatment to participating individuals.

The analysis proceeded in two stages. First, comparisons were made using the three groups of treatment participants based on their level of participation: those that completed the first time through (completers), those that refused to participate at all (refusals), and those that attempted treatment (attempters). Both analysis of variance (ANOVA) and multinomial regression were used to assess whether there were any differences between the three groups. ANOVA assumes that the variances in each group are similar, the observations/groups are independent, and the within-group distribution is normal. ANOVAs are helpful to demonstrate whether there are overall group differences, but this type of analysis does not allow for prediction or assessing the impact of treatment on recidivism. Multinomial regression was then used to predict treatment participation. This model assumes linearity between the predictor variables and the log of the outcome, the data are not related (independence of errors), and that the independent variables are not too highly correlated, termed multicollinearity (Field, 2009). Considering who these

completers from those getting some dose of treatment and those getting no dose of treatment at all (the refusals/reference category). Furthermore, the number of subsequent treatment completers was relatively small in the context of the overall sample size and using three groups also led to fairly equal groups for analysis.

individuals are and what may impact their treatment participation are helpful in understanding this population.

The analysis then addressed recidivism among this group of individuals. Logistic regression is beneficial to evaluate overall recidivism as a snapshot of those that were incarcerated for a sex offense, and the data can be truncated to assess offending within specific time periods (e.g. within the first three, five, or ten years). Like the multinomial regression models, myriad categorical and continuous independent variables are used as predictor variables in the logistic regression model. In this analysis, the categories of treatment participation are the key independent variable in predicting the likelihood of an individual recidivating after release. The assumptions in logistic regression are the same as those noted above regarding multinomial regression.

One potential issue with the data being used for the study are the incarcerated individuals' unequal time at risk, as these individuals have different sentence lengths and are released at different points during the study period. Controlling for unequal time at risk is an important aspect of this analysis. Therefore, survival analysis was also conducted. Survival analysis yields a more accurate estimate of recidivism by standardizing time at risk (Przybylski, 2014a; Vandiver, 2006). Using survival analysis can show who offends during the period under study and how quickly one recidivates after release (e.g. rate of failure). It can also account for those that do not recidivate at all during the time period (Prentky & Lee, 2007). Survival analysis is also useful when assessing recidivism because it can take into account data that are right-censored (Allison, 2014); this is because data are available up until a certain time before being cut-off (Langton et al., 2008). Data in this study are available through September 2014. In

particular, Cox regression was well-suited to assess variance in the timing of the event during the twenty-four year time period in the current study. It could also be used to track the time to recidivate based on the three different treatment categories.

Similar to the issue of unequal time at risk is the potential issue associated with differences in monitoring and detection between the individuals released from prison. Those that successfully completed treatment and were released early were still being monitored while in the community whereas those that did not complete treatment serve their full sentence and may have no further monitoring requirements upon release. As such, technical violations are only an option for those on parole after being incarcerated. Thus, there could be a potential bias in detecting some offending behavior among one group of individuals that are released from prison.

Table 1 provides descriptive data on individuals released from prison based on their release type: released on supervision or institutional discharge. Over two-thirds of the individuals are released to supervision whereas a little under one-third are fully discharged from prison at the time of their release and do not receive supervision on parole. There are similarities in the percentage of individuals that have a new conviction for either a sex offense or an offense of any kind. Differences clearly emerge when looking at the percentage of new incarceration/technical violation. Not surprisingly, those released to supervision are being closely monitored and can be revoked and returned to prison quickly, which is why nearly 50% of this group has a return to prison versus approximately 25% of those institutionally discharged.²² However, the multiple methods being used in which to assess recidivism still allow for meaningful comparisons to be

²² In the data, only the date of the technical violation is available. The specific type of violation is not detailed, so it is not possible to further differentiate the type of behavior to make further comparison between individuals released on supervision to those institutionally discharged.

made. Though technical violations will be an indicator only among those that have completed treatment and are conditionally released, the other available measures will also assess new convictions and returns to prison among all treatment participation groups (refusals, attempters, and completers).

Table 1 Release Type from Incarceration (N=7,156)²³

	Released to Supervision (n=5,144)		Institutional Discharge (n=2,012)	
	n	%	n	%
New conviction – any offense type	1,440	28	553	27.5
New conviction for sexual offense	305	5.9	104	5.2
Return to prison	2,401	46.7	472	23.5

The various analyses used in the study allow for both descriptive and predictive findings to be made. The available data provide a number of unique observations about individuals who offend sexually, including assessing their behavior over a large span of time after being released from prison. This is an important contribution in building our knowledge about treatment and recidivism for this population. The next chapter addresses the results using these diverse analytic methods.

CHAPTER 4: RESULTS

The goal of the study was to examine how treatment impacts recidivism among a population of individuals incarcerated for sexual assault offenses in Missouri. In doing so, it is important to outline first what factors may influence participation in treatment

²³ The release type was unknown or not listed for 33 individuals and 4 had a new charge.

and then, based on this, how it affects recidivism over time. Therefore, this chapter will be organized to highlight the findings based on each step of the analysis. First, analysis was conducted to differentiate who completes sex offender treatment and who does not while incarcerated. The second stage of the analysis addressed recidivism among these individuals based on their level of treatment participation.

TREATMENT COMPLETION

The main research question guiding the first part of the analysis was: What are the differences between sex offenders who complete treatment the first time through (completers), go through treatment multiple times or fail (attempters), or refuse treatment (refusals)? Initial descriptive analysis was completed first. Then, Analysis of Variance (ANOVA) and multinomial regression were used to describe who completes treatment and who does not.

Descriptive Findings

Overall, approximately 90% of individuals who were designated as eligible for the MOSOP attempted Phase I of the program, and about 80% successfully completed this phase on the first attempt. Seventy percent attempted Phase II for the first time, and approximately 46% of that group successfully completed the treatment program. Tables 2 and 3 show the descriptive findings for the variables. Table 2 highlights the findings related to those that participated in Phase I of the treatment program, and Table 3 shows the findings associated with those that participated in Phase II of treatment.

Table 2 Descriptive Statistics for Phase I Treatment Participation (N=7,193)

No attempt at Phase I (refusals) (n=783)	Successfully complete Phase I on first attempt (completers) (n=5,722)	Try Phase I 2+ times (attempters) (n=688)
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	% or M (SD)	% or M (SD)	% or M (SD)	χ^2
Reconviction for any offense	32.7%	26.5%	33.6%	**
Reconviction for a sex offense	8.3%	5.4%	5.7%	
Return to prison	42.3%	40.3%	36.6%	*
Demographics				
Non-white	25.8%	23.8%	27.5%	*
Married	20.8%	26.2%	18.0%	***
High school graduate	40.7%	63.5%	50.7%	***
Age at incarceration	33.47 (12.34)	32.87 (11.14)	31.61 (12.41)	
Age at release	38.56 (13.06)	38.11 (11.64)	37.36 (13.11)	
History and Institutional Behavior				
Prior sentences	3.34 (3.08)	2.94 (2.75)	2.95 (2.51)	
Found guilty	14.0%	8.1%	9.3%	***
Child victim	16.0%	23.0%	31.4%	
Time served in months	61.08 (57.64)	62.72 (49.26)	68.80 (50.11)	
Major rule violation	16.6%	7.2%	13.5%	***
Drug treatment (tx.)	5.1%	10.1%	10.2%	***
Cognitive tx.	3.7%	11.0%	9.9%	***
Needs				
Medical support required	11.6%	5.8%	9.3%	***
Mental health support required	25.5%	13.1%	22.2%	***
Medium/high custody risk	18.3%	6.0%	14.3%	***
Substance use tx. required	13.9%	32.8%	35.3%	***
Release				
Institutional discharge	41.8%	21.8%	63.5%	***
1995 or after	71.0%	83.7%	87.8%	***

*p<.05 **p<.01 ***p<.001

Table 3 Descriptive Statistics for Phase II Treatment Participation (N=7,193)

	No attempt at Phase II (refusals) (n=2,158)	Successfully complete Phase II on first attempt (completers) (n=3,323)	Try Phase II 2+ times (attempters) (n=1,712)	
	% or M (SD)	% or M (SD)	% or M (SD)	χ^2
	33.7%	24.4%	27.0%	***

Reconviction for any offense				
Reconviction for a sex offense	8.9%	3.7%	5.6%	***
Return to prison	39.3%	46.4%	29.3%	***
<i>Demographics</i>				
Non-white	25.0%	24.9%	22.5%	
Married	22.8%	26.5%	24.4%	**
High school graduate	42.2%	71.3%	59.7%	***
Age at incarceration	33.14 (12.31)	32.51 (10.43)	33.01 (12.02)	
Age at release	38.07 (12.87)	37.70 (10.90)	38.90 (12.63)	
<i>History and Institutional Behavior</i>				
Prior sentences	2.91 (2.86)	3.18 (2.96)	2.71 (2.29)	
Found guilty	11.2%	8.0%	7.8%	*
Child victim	14.4%	26.9%	26.4%	***
Time served in months	58.85 (51.75)	62.23 (50.17)	70.24 (48.13)	
Major rule violation	13.6%	6.0%	8.3%	***
Drug tx.	4.7%	12.1%	10.6%	***
Cognitive tx.	4.1%	13.8%	10.4%	***
<i>Needs</i>				
Medical support required	9.6%	5.0%	6.6%	***
Mental health support required	23.9%	8.8%	17.2%	***
Med/high custody risk	15.9%	2.2%	10.0%	***
Substance use tx. required	16.0%	39.9%	32.7%	***
<i>Release</i>				
Institutional discharge	39.4%	2.6%	62.7%	***
1995 or after	68.5%	91.3%	84.0%	***

*p<.05 **p<.01 ***p<.001

Initial descriptive analysis was completed to briefly compare those that successfully completed the treatment phase (completers) relative to the other two groups (refusals/attempters). The significant differences are highlighted in Tables 2 and 3. Chi-square analysis specific to Phase II of treatment revealed that there was a significant difference between the completer group and the other groups on new conviction, $\chi^2(1) = 35.20$, $p<.001$, and new sex conviction, $\chi^2(1) = 45.58$, $p<.001$; the completers were less

likely to have a new conviction. On the other hand, treatment completers were significantly more likely to have a return to prison, $\chi^2(1) = 99.15, p < .001$.

A number of differences emerged based on the initial descriptive analysis. The treatment completers group was more likely to be married, have a high school education, have a child victim, have a higher substance use score, and participate more in drug and cognitive treatment; this group was less likely to be found guilty by a jury or have a major rule violation. The completer group was also a lower custody risk and less likely to have medical or mental health needs. The completers were also much more likely than the others to be released to supervision and released after the registration requirement change in 1995.

ANOVA Results

The ANOVA results show comparisons among the continuous variables. Table 4 highlights findings related to participation in Phase II of the program, the treatment delivery phase. The first phase of the program focuses on initial testing before progressing into treatment. During Phase I, the individuals are not housed in the therapeutic community (TC), and they remain in the general prison population. For the ANOVA comparisons, participation in drug treatment and cognitive therapy groups were made continuous variables; the range for enrollment in drug treatment programs was 0-5, and the range for cognitive therapy was 0-11 programs.²⁴ Table 4 lists each variable, the mean based on the treatment participation group, the overall F-ratio, and significance. Levene's test of homogeneity of variances was evaluated, and Welch's F was reported when an assumption of ANOVA was violated.

²⁴ In all other analyses, participation in programming was made a dichotomous variable.

Table 4 ANOVA Results based on Treatment Participation (N=7,193)

	Treatment Participation Groups			F Ratio	p
	Refusals _a	Completers _b	Attempters _c		
Age at incarceration ²⁵	33.14	32.51	33.03	2.37	.090
Age at release	38.07	37.71 _c	38.90 _b	5.49**	.004
Prior sentences	2.91 _{bc}	3.18 _{ac}	2.71 _{ab}	19.43***	.000
Drug treatment participation	.06 _{bc}	.15 _a	.12 _a	47.32***	.000
Cognitive treatment participation	.05 _{bc}	.20 _{ac}	.15 _{ab}	77.00***	.000
Time served in months ²⁶	58.85 _{bc}	62.23 _{ac}	70.24 _{ab}	25.56***	.000

NOTE: The subscript (a, b, or c) indicates significant group differences at $p < .05$ based on post-hoc analysis.

Post-hoc tests were completed to assess the within-group differences. Bonferroni and Games-Howell tests were both considered, and the results of the Games-Howell procedure are displayed in Table 4. Bonferroni is good for control over type 1 error rate; the Games-Howell procedure is helpful with population variances or when there is a question of group variances being equal (Field, 2009). The findings between the two tests were identical except for number of prior sentences for the refusals/attempters (Bonferroni $p > .05$, Games-Howell, $p < .05$). All other significant findings were the same based on post-hoc analysis.

²⁵ Age at incarceration and age at release were highly correlated. Therefore, age at incarceration was removed as a variable in all multivariate analyses.

²⁶ The available data include six categories to address the percent of sentence required to be served for all individuals. The categories are 0, 40, 50, 60, 80, and 85%. The largest category was 0% ($n=6,724$) followed by 40% ($n=238$) and 85% ($n=128$). The data show that 93.5% of all the incarcerated individuals were within the same category for the percent of sentence required to be served. The analysis initially included time served in months as an independent variable in all the models. It was not significant in any model, and thus was discarded for parsimony in the multivariate analysis. Additionally, correspondence with DOC staff suggests that regardless of treatment status/participation, those convicted of a sex offense ultimately serve a similar percentage of their overall sentence.

The findings show that there was no significant difference between the three groups related to age at incarceration. On average, though, the completers are younger than the individuals in the other two groups. However, the completers and attempters are significantly different on their age at release. Individuals in the attempter group are significantly older at the time of their release; there is not a significant difference between the refusal and completer groups. All three groups are significantly different from one another in number of prior sentences. On average, completers had the most prior sentences whereas the attempters had the fewest. Likewise, the three groups are all significantly different regarding their participation in cognitive treatment. The refusal group is significantly different than the other two groups on drug treatment participation whereas the completer and attempter groups are similar on this variable.

No one group emerged as more alike or dissimilar than the others based on this initial analysis. Each group shared a relatively equal number of similarities as differences. The refusal group was unlike the other two groups on treatment participation. This may not be surprising given that these are also the individuals refusing to participate in the sex offender treatment program. The refusals were like each of the other two groups based on their age at release, though completers and attempters were significantly different. All three groups were similar related to the age at the time of their incarceration.

Multinomial Regression Results

The multinomial regression model results are presented in Table 5. Similar to the ANOVA results, the findings presented are based on Phase II, the delivery of treatment. The overall model fit is statistically significant, $\chi^2(28, 7,006) = 1,285.82, p < .001$, and

19% of the variance is explained, Nagelkerke $R^2 = .19$. The refusal group is the reference category.

Table 5 Multinomial Regression Findings Based on Treatment Participation

	Completers		Attempters	
	B (SE)	Exp (B)	B (SE)	Exp (B)
<i>Demographics</i>				
Non-white	.25 (.07)***	1.28	.06 (.08)	
Married	.29 (.07)***	1.34	.14 (.08)	
High school graduate	.90 (.06)***	2.45	.48 (.07)***	1.62
Age at release	-.01 (.00)**	.99	.01 (.00)*	1.01
<i>History and Institutional Behavior</i>				
Prior sentences	.03 (.01)*	1.03	-.04 (.01)**	.96
Found guilty	-.31 (.11)**	.73	-.31 (.12)**	.73
Child victim	.38 (.08)***	1.46	.45 (.09)***	1.56
Major rule violation	-.49 (.12)***	.61	-.35 (.12)**	.70
Drug treatment (tx.)	.35 (.13)**	1.42	.49 (.14)***	1.64
Cognitive tx.	.61 (.13)***	1.85	.48 (.14)***	1.62
<i>Needs</i>				
Medical support required	-.49 (.12)***	.61	-.47 (.13)***	.63
Mental health support required	-.81 (.09)***	.44	-.26 (.09)**	.77
Medium/high custody risk	-1.56 (.15)***	.21	-.26 (.11)	
Substance use tx. required	.93 (.08)***	2.55	.72 (.09)***	2.06

NOTE: The refusal group is the reference category.

* $p < .05$ ** $p \leq .01$ *** $p \leq .001$

First, when comparing the refusals to the completers, the groups were significantly different on all variables in the model. Thus, there appears to be some fundamental differences between these two groups. The odds were increased that an individual in the completer group was more likely to be non-white, married, or have a child victim than someone in the refusal group. Individuals in the refusal group were

more likely than the completer group to be found guilty; the odds were reduced by about 27% that an individual in the completer group was found guilty. The completers were also significantly less likely to have major rule violations, and this group had increased odds of participating in drug or cognitive treatment. When assessing needs between the two groups, individuals in the refusal category were more likely to require medical or mental health support, and they were a higher custody risk. The largest differences between groups were related to education and the need for substance use treatment; those in the completer category were about one and a half times more likely to have a high school education or equivalent, and they had about the same odds that substance use treatment was required.

A slightly different picture emerged when comparing the refusals to the attempters. Race, marital status, and custody risk were not significantly different between these two groups. Like the comparison between the refusal/completer groups, there were significant differences between the refusals and attempters for victim type, plea, drug and cognitive treatment participation, prior sentences, and major rule violations. There were increased odds that those in the attempter group had a child victim, participated in either drug or cognitive treatment, pled guilty, and had a high school diploma or equivalent. The attempter group also had significantly fewer major rule violations, and they were less likely to require medical or mental health support. The largest difference between these groups was for substance use treatment with those in the attempter group much more likely to have treatment required.

Comparing the refusal group to the other two groups is important to evaluate if and how these individuals are different since they have opted not to participate in the sex

offender treatment program. However, an interesting group available for analysis is the attempter group. These individuals received some dose of treatment, and it is helpful to see if the attempters are more like the refusals or the completers as a way to understand what could work in treatment. Therefore, the multinomial regression model was re-run in which the attempters were used as the reference category. This was done to delineate differences specifically between the completer and attempter groups. Table 6 shows the findings comparing the attempters and completers; the findings comparing the attempters and refusals were presented in Table 5.

Overall, the completer and attempter groups were similar on their history and institutional behavior. No significant differences emerged based on plea type, having a child victim, having major rule violations, participating in drug or cognitive treatment, or requiring medical support. The odds were higher that someone who was non-white, married, had prior sentences, or required substance use treatment was in the completer group. Individuals in the completer group were also significantly younger at the time of their release, and they were significantly more likely to have a high school education than those in the attempter group. The odds were increased by over 50% that a high school graduate or equivalent was in the completer group. Custody/risk needs emerged as the largest difference between the two groups, with the odds over three times higher that someone with medium or high risk was in the treatment attempter group. Likewise, individuals who required mental health support were also more likely to be an attempter than a completer. These individuals may be harder to manage in the existing treatment milieu that makes it so they are less likely to be successful in completing treatment the first time through.

Table 6 Multinomial Regression Comparing Attempters to Completers

	Completers	
	B (SE)	Exp (B)
<i>Demographics</i>		
Non-white	.19 (.08)**	1.20
Married	.15 (.07)*	1.16
High school graduate	.41 (.07)***	1.51
Age at release	-.01 (.00)***	.99
<i>History and Institutional Behavior</i>		
Prior sentences	.07 (.01)***	1.07
Found guilty	-.00 (.12)	
Child victim	-.07 (.07)	
Major rule violation	-.13 (.13)	
Drug tx.	-.14 (.10)	
Cognitive tx.	.13 (.10)	
<i>Needs</i>		
Medical support required	-.03 (.13)	
Mental health support required	-.55 (.09)***	.58
Medium/high custody risk	-1.47 (.15)***	.23
Substance use tx. required	.21 (.07)**	1.24

NOTE: The attempter group is the reference category. Comparisons between the refusals and attempters are presented in Table 5.

*p<.05 **p≤.01 ***p≤.001

Perhaps not surprisingly, individuals that refuse treatment and those that complete treatment the first time through are significantly different on all variables assessed in the model. These factors could be considered as barriers to treatment. For instance, individuals requiring medical or mental health support may face obstacles that make them less likely to participate in treatment of any kind while in prison. The results are more nuanced when comparing individuals that attempt treatment to the other two participant groups. Overall, attempters and completers are more similar in their prior criminal history

and institutional behavior. The attempter group shared more in common with the refusal group related to demographics and custody/risk needs.

To understand further those that attempt treatment, additional variables available in the data were used to assess these individuals' level of treatment participation. For instance, number of days enrolled in Phase II of treatment can show the dose of treatment received before the treatment ended. The average number of days an individual from the attempter group was enrolled on their first attempt was 132.98 days (SD=88.65, Range=1-429 days).²⁷ The average days enrolled during a second attempt at Phase II was 202.23 days (SD=110.67, Range=1-436 days). Also, available data included multiple categories to show the reason for the individual's exit from treatment. When the reason was noted in the data, the top categories to explain an individual's exit from Phase II treatment were a lack of progress, not applying treatment concepts, refusal, administrative decision, or segregation.²⁸ Figures 1 and 2 show the top four reasons, when a reason was identified, for exit from treatment based on the 1,712 individuals that had multiple attempts; figure 1 is for a first attempt, and figure 2 represents those who had a second attempt.²⁹

²⁷ Analysis was based on the participant being enrolled in at least one day of treatment. According to the MO DOC, Phase II treatment typically lasts between 9-12 months. For comparison purposes, individuals that completed treatment the first time through were in treatment an average of 282.94 days (SD=56.88, Range 1-672).

²⁸ This analysis is based on the total sample size (N=7,193). Other available categories to explain the reason for exit include absences, absconder, completion, no admission of guilt, new misdemeanor, or technical violation. There was also a category in which no reason was noted.

²⁹ For a first attempt, 32% of the individuals had no reason for exit identified in the data; approximately 80% did not have a reason for exit identified during the second attempt.

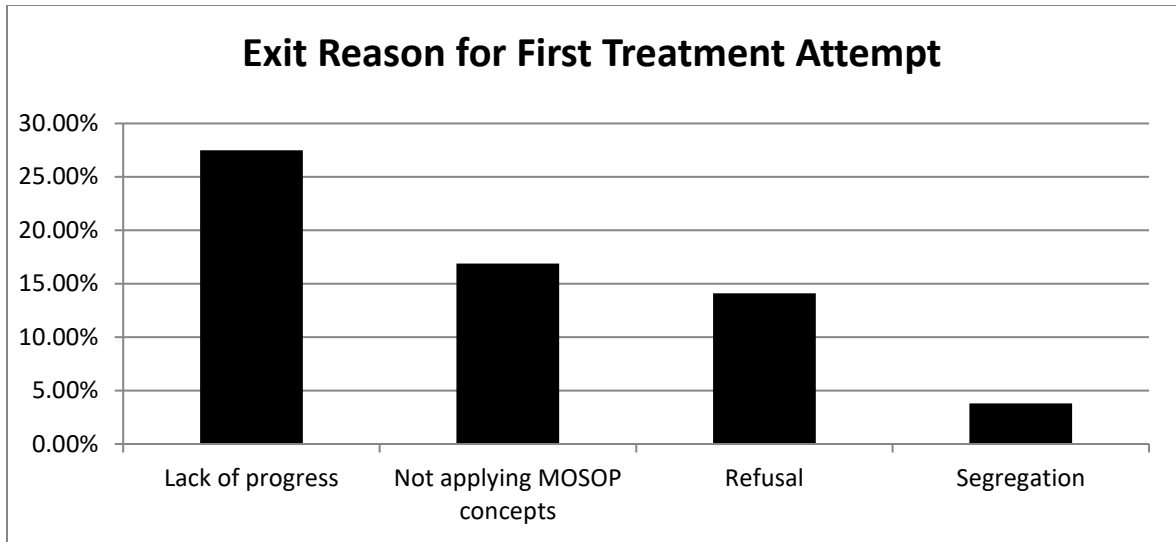


Figure 1 Reason for Exit at First Attempt at Phase II Treatment (N=1,712)

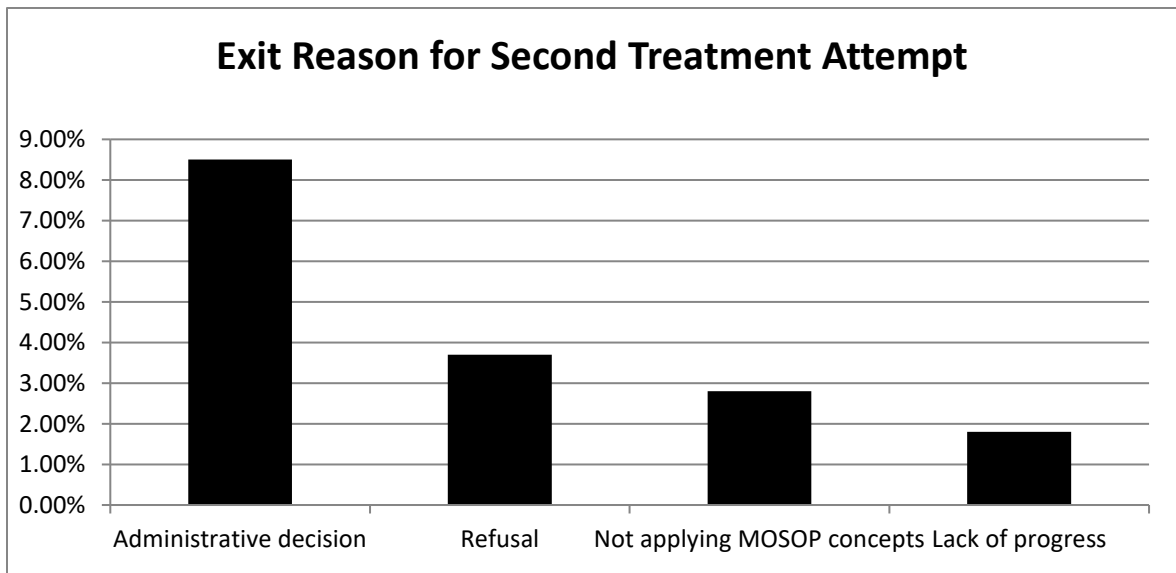


Figure 2 Reason for Exit at Second Attempt at Phase II Treatment (N=1,712)

The focus of the first research question was to delineate individuals into the three treatment groups, with the treatment group (completer, refusal, or attempter) being the dependent variable. The next step is assessing the relationship between treatment

participation and recidivism. In these models, MOSOP treatment participation becomes the main independent variable.

RECIDIVISM

The research question guiding the second part of the analysis was: What is the overall rate of recidivism between sex offenders who complete treatment and those that do not? Related to this, how quickly do these individuals recidivate (if they do) based on their participation in treatment? Logistic and Cox regression are used for this analysis.

Logistic Regression

For the logistic regression analysis, the dependent variable is based on a new conviction (any or sex-offense specific)³⁰ and a return to prison.³¹ Dichotomous variables were created using the first date listed after an individual was released from prison, so it is based on their first new charge or first new return to incarceration.³² The main independent variable for the analysis is MOSOP Phase II treatment participation. Dichotomous variables were created to indicate the level of *treatment participation*: treatment completion the first time through compared to the other two treatment participation groups (0=refusals/attempters, 1=completed), those that attempted treatment regardless of ultimate success at treatment completion (0=refusals/completers,

³⁰ Further analysis was attempted to differentiate the new charge into specific offense categories including violent, sex, drug, property, and other, but the groups were comprised of very small sample sizes in which to conduct meaningful analysis.

³¹ A return to prison includes returns for a new sentence or as a result of a technical violation.

³² Individuals who died during the follow-up period were only tracked by MODOC if they were released to supervision and under monitoring or re-incarcerated at the time of their death. Otherwise, individuals institutionally discharged were not monitored, and the DOC would not know if an individual died. Based on the data, approximately 2.5% or 185 individuals were noted in their type of release as having died during the entire period under study. If the individual died, there would not be a first new conviction date or return to prison listed, so they would not be included in the analysis based on time to recidivism.

1=attempted), and those that refused (0=completers/attempters, 1=refused)³³. Additionally, release type and release date were included in this analysis to account for features specific to the individuals upon release from incarceration. The results of the logistic regression models are reported in Table 7.

Table 7 Logistic Regression Predicting Reconviction and Return to Prison (N=6,989)³⁴

	Any New Conviction		New Sex Offense Conviction		Return to Prison	
<i>Demographics</i>	B (SE)	Exp (B)	B (SE)	Exp (B)	B (SE)	Exp (B)
Non-white	.28 (.07)***	1.33	.21 (.12)		.49 (.06)***	1.63
Married	.12 (.07)		.16 (.12)		-.44 (.07)***	.65
High school graduate	-.22 (.06)***	.80	-.20 (.11)		-.30 (.06)***	.74
Age at release	-.07 (.00)***	.93	-.02 (.00)***	.98	-.05 (.00)***	.95
<i>MOSOP Participation</i>						
Completed	-.25 (.08)**	.78	-.82 (.15)***	.44	-.00 (.08)	
Attempted	-.21 (.08)**	.81	-.31 (.14)*	.73	-.18 (.08)*	.83
<i>History and Institutional Behavior</i>						
Prior sentences	.11 (.01)***	1.12	.07 (.02)***	1.08	.12 (.01)***	1.12
Found guilty	-.33 (.12)**	.72	-.23 (.21)		-.03 (.10)	
Child victim	-.11 (.08)		-.27 (.16)		.02 (.07)	
Major rule violation	.23 (.10)*	1.25	.13 (.17)		.40 (.10)***	1.50
Drug tx.	.32 (.10)**	1.37	-.45 (.23)*	.64	.36 (.09)***	1.44
Cognitive tx.	-.43 (.11)***	.65	-1.04 (.29)***	.35	-.18 (.10)	
<i>Needs</i>						
Medical support required	-.44 (.15)**	.65	-.87 (.32)**	.42	-.47 (.13)***	.63
Mental health support required	-.19 (.09)*	.82	.04 (.14)		.04 (.08)	
Medium/high custody risk	.55 (.11)***	1.73	.39 (.16)*	1.47	1.09 (.11)***	2.97
Substance use tx. required	-.16 (.07)*	.85	.60 (.13)***	1.83	.22 (.07)***	1.24

³³ The refused category is not shown in the regression models because it was redundant when comparing the different groups of treatment participation.

³⁴ Due to missing cases (n=204), the total is not the full sample size of 7,193 for the regression analysis.

Release

Institutional discharge	.18 (.09)*	1.20	-.20 (.16)		-1.18 (.09)***	.31
1995 or after	-.19 (.09)*	.83	-.45 (.15)**	.64	.45 (.09)***	1.57
X ²	1,051.04***		208.37***		1,447.74***	
Nagelkerke R ²	.20		.08		.25	

*p<.05 **p≤.01 ***p≤.001

A number of variables emerged as significant in predicting a new conviction for any type of offense. In this model, the odds were reduced by about 22% that an individual who successfully completed Phase II treatment the first time through had a new conviction, and it was about 20% less for those that attempted treatment regardless if they were ultimately successful in completing treatment. Being non-white, having more prior prison sentences, having more major rule violations, participating in drug treatment, being a higher custody risk, and being institutionally discharged from prison all increased the odds of having a new conviction. An individual was less likely to have a new conviction if he was older at the time of release, had a trial in which he was found guilty, was released in or after 1995 or required medical, mental health, or treatment for substance use. Likewise, individuals who had a high school education or equivalent had reduced odds of a new conviction. Participation in cognitive treatment participation also reduced the odds by .35 that the individual would have a new conviction for any type of offense. This treatment is separate than the treatment offered through the MOSOP. Being married and having a child victim were the only two variables that did not emerge as significant in this model. While the overall model for any new conviction was statistically significant, it only explains 20% of the variance, Nagelkerke R² = .20.

Fewer variables emerged as being significantly related to a new conviction for a sex offense as compared to the first model. Importantly, for individuals that successfully completed Phase II of the MOSOP treatment the first time through, their odds were reduced by over half of having a new conviction for a sex offense. The odds were also reduced by over a quarter that individuals that attempted treatment had a new conviction for a sexual offense. Given that the MOSOP is geared toward reducing future sexual offending, attempting and/or completing treatment appears to make a significant and substantive difference. Cognitive treatment participation also significantly reduced the odds of a new sexual conviction as well. In this model, being released after the notification law changed in 1995 reduced the likelihood of having a new conviction for a sexual offense. Only a marginal amount of variance is explained in the model, Nagelkerke $R^2 = .08$.

The final model in Table 7 shows the findings for a return to prison. Treatment completion the first time through at the MOSOP did not significantly impact the likelihood of a return to prison. However, attempting treatment, regardless of ultimately being successful, did reduce the odds of a return to prison. Likewise, being married reduced the odds of a return to prison by about 36%. Individuals with at least one major rule violation or who had high custody/risk needs were significantly more likely to have a return to prison; custody risk emerged as the most robust finding in predicting return to prison. Participating in drug treatment or being required to participate in treatment for substance use also led to increased odds of returning to prison. A release after January 1995 and the type of release also significantly impacted the likelihood of a return to prison. The odds were reduced by 70% that an individual institutionally discharged

would have a return to prison. Clearly driving the findings related to the timing and type of release are individuals released to supervision that are being monitored much more closely and can easily be returned to prison for a technical violation. One-quarter of the variance is explained in the model assessing a return to prison, Nagelkerke $R^2 = .25$, which improves upon the other logistic regression models.

An additional step was taken to assess the likelihood of having a new sexual conviction. Victim type was added to predict whether an individual previously convicted of a sexual assault offense against a child was more or less likely to have another child victim if he did have a new conviction for a sex offense; it is a question of predicting offense specialization to the extent possible using the available data. There was only a very small portion of individuals that received a new conviction for a sex offense; the analysis is based on 394 cases (5.5%). The overall model fit is statistically significant, $\chi^2(18, 394) = 50.21$. Sixteen percent of the variance is explained in this model, Nagelkerke $R^2 = .16$. However, only three variables in this model reached statistical significance: race, prior sentences, and victim type.³⁵ The most robust finding in this analysis was related to victim type. If an individual served time for having a child victim then the odds were over double that he would have another child victim if he recidivated sexually. Thus, as suggested in the literature, there may be something unique about individuals with child victims relative to those with adult victims. Race was another significant finding. A white male was more likely to have a child victim if he did have a new sexual conviction. Or, put another way, a male who was a minority was less likely to have a child victim if he had a new conviction for a sexual offense. Individuals with more prior sentences were also less likely to have a new conviction for a sexual offense, if they did

³⁵ A table is not shown since only three variables emerged as significant.

recidivate. Nothing else in this model was statistically significant, including successfully completing Phase II of the MOSOP treatment. While treatment completion may impact the likelihood of a new conviction for a sexual offense overall, it does not appear to impact the type of sexual offending based on victim type as shown in this analysis.

Analysis was also completed to assess the level of re-conviction based on specific time periods. The date of the new conviction was subtracted from the release date to cover the number of individuals that had a new conviction within the first 3, 5, or 10 years post-release from prison. Hence, the sample sizes vary based on who was at risk during each time interval. Table 8 highlights the findings related a new conviction for any type of offense. Overall, 616 individuals had a new offense within 3 years, 1,016 within 5 years, and 1,115 within 10 years.

Table 8 Logistic Regression Predicting Any New Conviction at Years 3, 5, and 10 Post-Release

	3 Years		5 Years		10 Years	
	B (SE)	Exp (B)	B (SE)	Exp (B)	B (SE)	Exp (B)
<i>Demographics</i>						
Non-white	.31 (.10)**	1.36	.33 (.09)***	1.40	.31 (.09)***	1.37
Married	.08 (.12)		.11 (.09)		.07 (.09)	
High school graduate	-.29 (.10)**	.75	-.21 (.08)**	.81	-.14 (.08)	
Age at release	-.08 (.01)***	.92	-.07 (.00)***	.93	-.07 (.00)***	.93
<i>MOSOP Participation</i>						
Completed	-.50 (.14)***	.61	-.42 (.11)***	.65	-.39 (.10)***	.67
Attempted	-.30 (.12)**	.74	-.23 (.10)*	.79	-.26 (.11)*	.77
<i>History and Institutional Behavior</i>						
Prior sentences	.17 (.01)***	1.18	.14 (.01)***	1.15	.13 (.02)***	1.14
Found guilty	-.56 (.21)**	.57	-.30 (.15)*	.74	-.50 (.16)**	.61
Child victim	-.06 (.12)		.02 (.10)		.17 (.12)	
Major rule violation	.28 (.15)		.22 (.13)		.32 (.13)*	1.38

Drug tx.	.50 (.15)***	1.64	.36 (.13)**	1.43	.41 (.18)*	1.50
Cognitive tx.	-.17 (.17)		-.13 (.15)		.40 (.43)	
<i>Needs</i>						
Medical support required	-.06 (.23)		-.28 (.20)		-.49 (.22)*	.61
Mental health support required	-.18 (.13)		-.25 (.11)*	.78	-.08 (.11)	
Medium/high custody risk	.88 (.14)***	2.42	.79 (.13)***	2.21	.61 (.13)***	1.84
Substance use tx. required	-.05 (.11)		.16 (.09)		.48 (.13)***	1.61
<i>Release</i>						
Institutional Discharge	.56 (.13)***	1.75	.36 (.10)***	1.44	.07 (.12)	
1995 or after	-.04 (.15)		-.15 (.12)		.07 (.10)	
X ²	697.94***		784.91***		643.46***	
Nagelkerke R ²	.23		.22		.20	
N	5,665		5,504		3,865	

*p<.05 **p≤.01 ***p≤.001

Table 8 shows that the models are all statistically significant across all three time periods, and each model explains between approximately 20-23% of the variance. Completing Phase II of treatment reduced the odds of having a new conviction by approximately 30-40%. The strongest finding was within the first 3 years, as the odds were reduced by 39%, but treatment still made a significant difference by year 10. Likewise, those that attempted treatment were about a quarter less likely to have a new conviction during the three time periods. Participation in and completion of treatment appears to have an enduring effect over time. Race, age at release, number of prior sentences, being found guilty, participation in drug treatment, and custody risk all retained statistical significance during each of the three time periods evaluated. Though

participation in drug treatment significantly predicted the likelihood of a new conviction, requiring substance use treatment was not statistically significant.

Within the first 3 years, the most robust finding was associated with custody risk. An individual that was a high custody level or high risk needs was approximately one and a half times more likely to have a new conviction within three years. This finding was very similar in year 5, and it remained the strongest finding at year 10. Medical support and required substance use treatment were not significant initially, but both reached significance after 10 years post-release. Having medical needs while incarcerated significantly decreased the likelihood of a new conviction ten years after release; the odds were reduced by approximately 40%. This may represent an aging population that had poorer health outcomes the longer they were released. Being institutionally discharged increased the odds of a new conviction for any type of offense during the first five years after release, but this did not retain significance after ten years.

Recidivism specific to a new conviction for a sexual offense was also assessed at years 3, 5, and 10 post-release from prison. Again, the sample sizes vary based on who was at risk during each time period. There were 111 individuals that had a new sexual conviction within 3 years, 203 within 5 years, and 252 within 10 years. Table 9 highlights the findings. Similar to the findings related to any new conviction, all three models assessing a new sexual conviction were statistically significant at 3, 5, and 10 years. However, each model only explained a marginal amount of the variance, 11% at year 3, 10% at year 5, and 12% at year 10.

Table 9 Logistic Regression Predicting a New Sexual Conviction at Years 3, 5, and 10 Post-Release

	3 Years		5 Years		10 Years	
	B (SE)	Exp (B)	B (SE)	Exp (B)	B (SE)	Exp (B)
<i>Demographics</i>						
Non-white	.18 (.22)		.20 (.16)		.15 (.16)	
Married	-.42 (.28)		-.11 (.18)		.11 (.16)	
High school graduate	-.44 (.21)*	.64	-.20 (.16)		-.22 (.15)	
Age at release	-.02 (.01)*	.98	-.02 (.01)**	.98	-.02 (.01)*	.98
<i>MOSOP Participation</i>						
Completed	-1.25 (.30)***	.29	-1.22 (.20)***	.30	-1.04 (.19)***	.35
Attempted	-.57 (.25)*	.56	-.61 (.19)***	.54	-.62 (.19)***	.54
<i>History and Institutional Behavior</i>						
Prior sentences	.12 (.02)***	1.13	.11 (.02)***	1.12	.07 (.02)**	1.07
Found guilty	-.33 (.39)		-.08 (.27)		-.17 (.27)	
Child victim	-.26 (.29)		-.16 (.21)		-.11 (.27)	
Major rule violation	.47 (.27)		.03 (.23)		.14 (.21)	
Drug tx.	-.42 (.41)		-.70 (.33)*	.49	-.46 (.37)	
Cognitive tx.	-.95 (.53)		-.59 (.38)		.27 (.64)	
<i>Needs</i>						
Medical support required	-.47 (.48)		-.89 (.43)*	.41	-1.03 (.44)*	.36
Mental health support required	-.07 (.25)		-.13 (.20)		.25 (.17)	
Medium/high custody risk	.56 (.27)*	1.75	.51 (.22)*	1.66	.39 (.20)*	1.48
Substance use tx. required	.84 (.25)***	2.32	1.12 (.18)***	3.08	1.95 (.18)***	7.00
<i>Release</i>						
Institutional Discharge	-.03 (.27)		-.05 (.21)		-.08 (.20)	
1995 or after	-.38 (.28)		-.44 (.21)*	.64	-.13 (.17)	
X ²	121.08***		151.46***		192.57***	
Nagelkerke R ²	.11		.10		.12	
N	6,702		6,154		4,051	

*p<.05 **p≤.01 ***p≤.001

Phase II treatment, age at release, number of prior sentences, custody risk needs, and required substance use treatment were all statistically significant across each of the three time periods. The findings associated with treatment participation were stronger in predicting a new conviction for a sexual offense than predicting a new conviction regardless of offense type. Individuals who successfully completed treatment the first time through had their odds reduced by about 65-70% that they would have a new conviction for a sexual offense, and this remained consistent at 3, 5, and 10 years after release from prison. Individuals that attempted treatment, regardless if they were ultimately successful, also had approximately 45% reduced of a new sexual conviction during the follow-up periods. Required substance use treatment had a significant and substantive impact on the likelihood of a new sexual conviction. Individuals required to have substance use treatment were one and a half to six times more likely to have a new sexual conviction. Individuals that medical support was not related to a new conviction for a sexual offense at year 3, but it became significant during the longer follow-up periods. If an individual required medical support, then the odds were reduced by about 60% that he would have a new conviction for a sexual offense at 5 or 10 years post-release. Having a child victim was not related to the likelihood of a new conviction (any or sexual) during any of the time periods.³⁶

³⁶ Several diagnostic tests were run to assess collinearity between the variables for all analyses. First, I checked the correlations between all of the predictor variables in the models. Per Field (2009), there could be a cause for concern of a correlation above .8 or .9. No variables were highly correlated to one another, nor did any approach the number suggested by Field. Then, I assessed the variance inflation factor (VIF) and tolerance. Research suggests that if the largest VIF is over 10 or if the average VIF is substantially greater than 1, then multicollinearity may be biasing the model (Field, 2009). The average of all the variables was within normal parameters. Similarly, tolerance is the inverse of the VIF, and research suggests to be concerned with anything conservatively below .2 (Field, 2009). Nothing was found to suggest multicollinearity between the variables. Finally, the standardized residuals, Cook's distance, and

Logistic regression is helpful to show recidivism based on the dichotomous measure of an individual successfully completing treatment or not, and what this pattern looks like over various time periods. However, a more nuanced assessment of recidivism among the three different treatment groups can account for any impact of treatment dosage as well as address recidivism over the full study period of approximately twenty-four years.

Survival Analysis/Cox Regression

The final step in the analysis was completing Cox regression models to account for the timing and occurrence of recidivism across the study period. Survival analysis allows comparisons to be made during the full twenty-four year period to account for the probability an individual recidivates at any given time, and it can assess which factors may affect how quickly an individual recidivates. Similar to logistic regression, the main independent variable is related to treatment participation. In this model, treatment participation was separated into three categories to again account for individuals who complete treatment the first time through (completers), those that refuse and/or do not participate (refusals), and those that attempt treatment (attempters). The last category encompasses those that may or may not be ultimately successful in treatment but conveys those that received at least some dose of treatment.

Table 10 shows the Cox regression analysis related to the timing of recidivism for a new conviction of any kind. Twenty-seven percent, or 1,940 individuals, had an event during the full time period under study. Similar to other regression analysis, several

DFBeta were checked to look for any influential cases in the model. There were no cases that indicated any concern of outliers in the model or influential cases. The standardized residual mean was at 0; there were no cases above 3, which would indicate an outlier. The average of the Cook's distance was 0, and no values were above 1. There is a concern of a DFBeta above 1, and no cases were close in the model. All diagnostic tests suggest no issues related to collinearity.

variables in the model impacted the likelihood of recidivism at a given time the individual was at risk. A positive coefficient suggests a hazard rate in which an individual had an increased probability of failing, or having a new conviction, controlling for all other variables in the model. A negative coefficient indicates a lower hazard rate and suggests an individual recidivated at a slower rate. The overall model was statistically significant, $\chi^2(18, 6,989) = 351.55, p < .001$.

Age at release and number of prior sentences are both statistically significant, but they do not appear to be substantively significant in predicting risk of recidivism. For individuals with a child victim, their hazard of recidivating is increased by 16%. As can be seen in the table, cognitive treatment participation, time of release, type of release, being high risk, and requiring substance use treatment also significantly increase the probability of having a new conviction. Treatment participation did not significantly impact the probability of recidivating in this model.

Table 10 Cox Regression on Time to Reconviction for Any New Offense (N=6,989)

		B (SE)	Exp (B)
<i>Demographics</i>			
Non-white		.05 (.05)	
Married		-.07 (.05)	
High school graduate		-.04 (.05)	
Age at release		-.01 (.00)**	.99
<i>MOSOP Participation</i>			
Phase II			
	Completed	-.09 (.06)	
	Attempted	-.03 (.06)	
<i>History and Institutional Behavior</i>			
Prior sentences		.04 (.01)***	1.04
Found guilty		-.12 (.10)	
Child victim		.15 (.06)*	1.16

Major rule violation	.14 (.07)	
Drug tx.	.04 (.08)	
Cognitive tx.	.25 (.10)**	1.29
<i>Needs</i>		
Medical support required	.00 (.13)	
Mental health support required	.08 (.07)	
Medium/high custody risk	.35 (.07)***	1.42
Substance use tx. required	.46 (.06)***	1.59
<i>Release</i>		
Institutional Discharge	.36 (.07)***	1.44
1995 or after	.33 (.07)***	1.39

*p<.05 **p<.01 ***p≤.001

Figure 3 shows the cumulative hazard of treatment participation on the timing of the event. As this graph shows, the three treatment conditions were not significantly different from one another, and participation in treatment did not impact an individual's time to a new conviction for any type of offense. However, as can be seen in Table 10, individuals with a child victim were quicker to recidivate, or failed faster, than those with an adult victim. Figures 4 and 5 show the variation in the timing between these two groups. Although this finding was statistically significant, the difference in the groups appears substantively small.

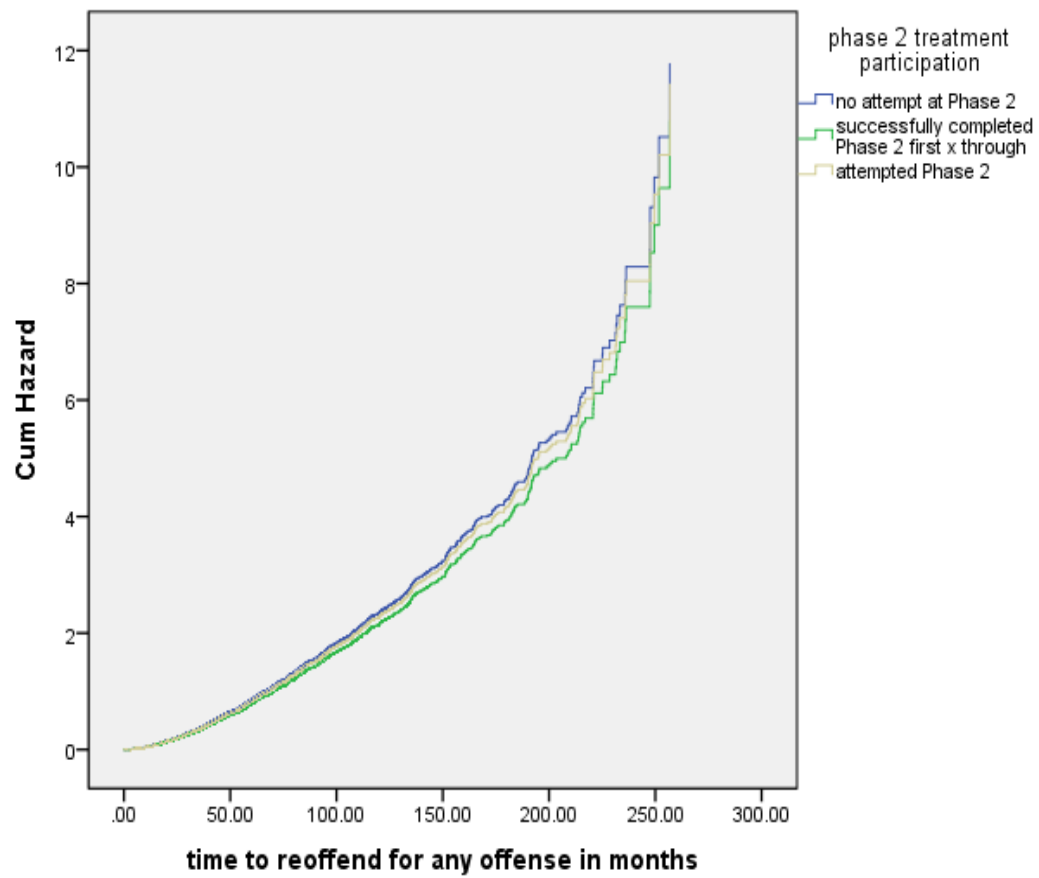


Figure 3 Cumulative Hazard of Any Recidivism Based on Treatment Participation

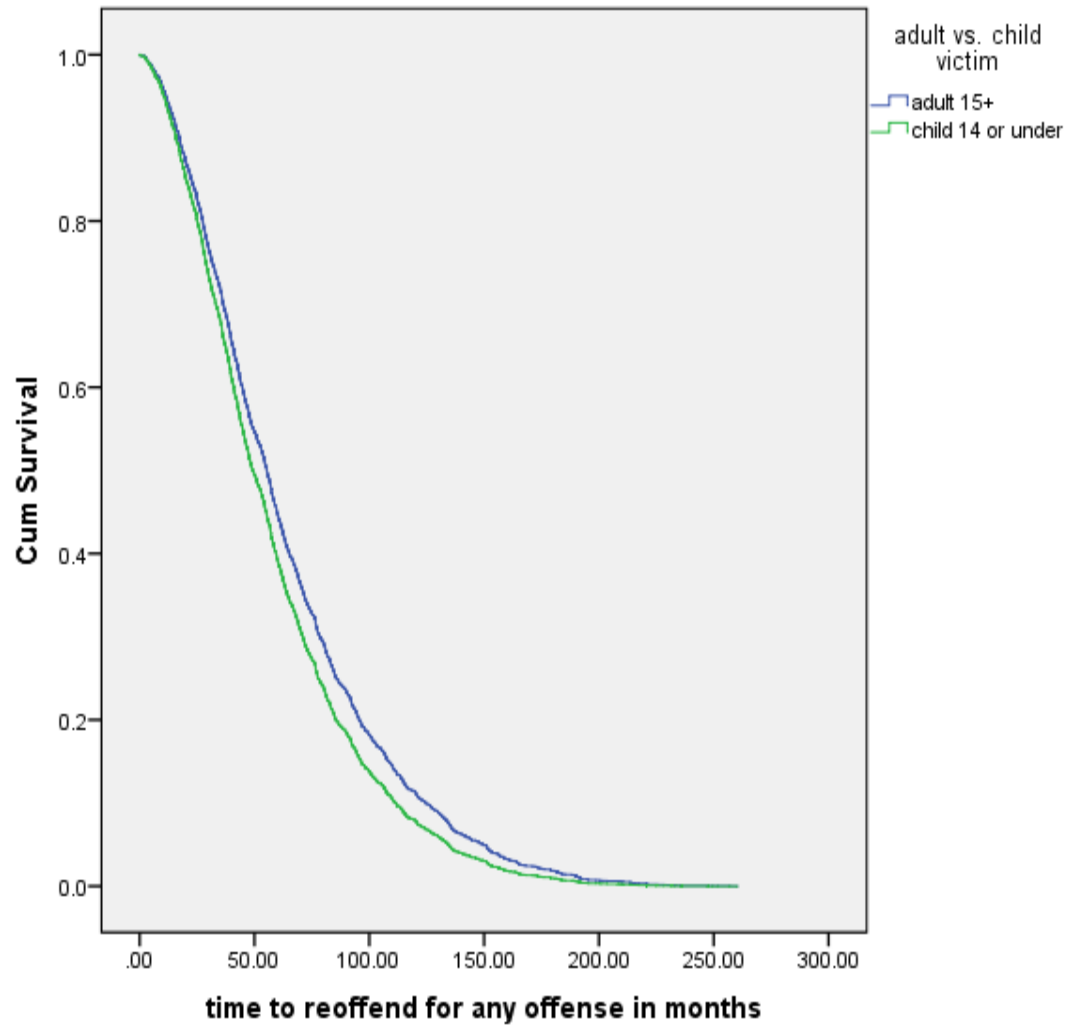


Figure 4 Cumulative Survival of Any Recidivism Based on Victim Type

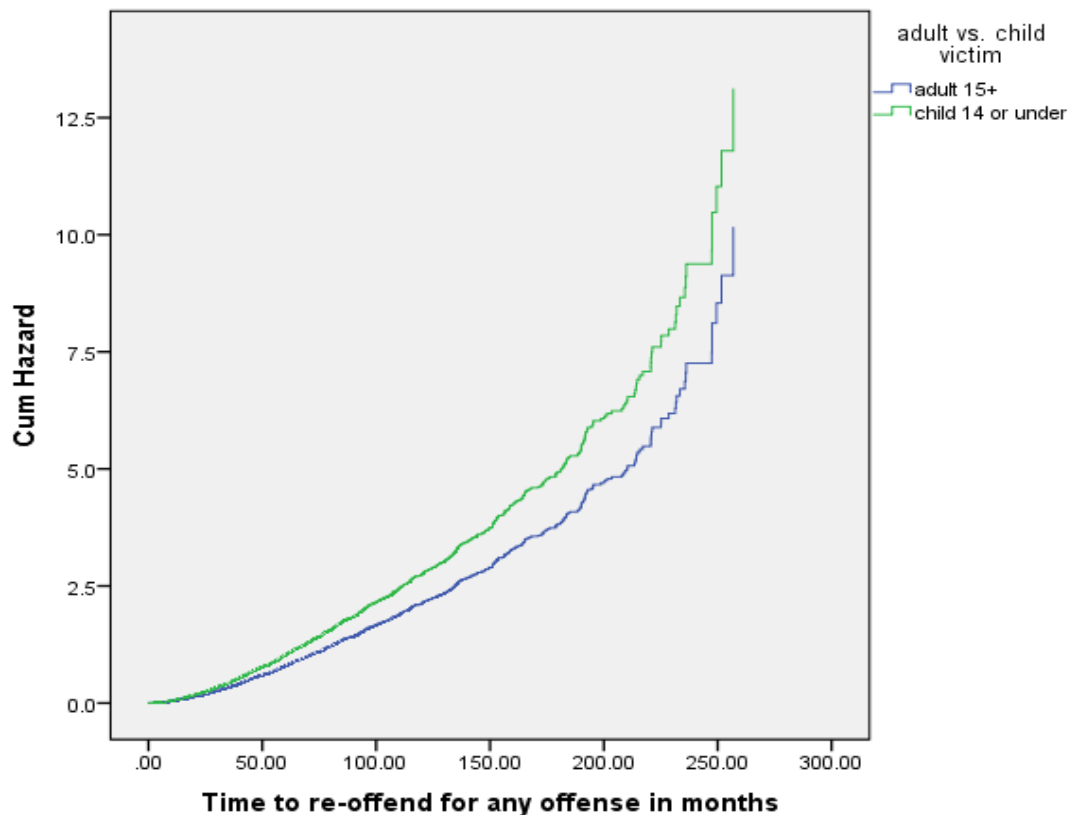


Figure 5 Cumulative Hazard of Any Recidivism Based on Victim Type

The final analysis was based on the probability of a new conviction for a sexual offense during the approximately twenty-four year period (or 288 months). Table 11 shows these findings. Only 398 individuals had a new sex offense conviction, which is 5.5% of the total sample size. The overall model is statistically significant, $\chi^2(18, 6,989) = 106.83, p < .001$. Only a few variables emerged as significantly impacting the probability of sexual reconviction: treatment completion, prior sentences, type and timing of release, and required substance use treatment. The hazard of having a new conviction for a sexual offense among treatment completers was 35% lower than individuals who refused to participate in treatment. Similarly, the hazard rate was 42% lower for those that attempted treatment compared to those that refused treatment. As the number of prior

sentences increase, so does the probability of having a new sexual conviction; it increases the likelihood by 6%. An individual released after the notification laws changed in 1995 and being institutionally discharged also increased the probability of a new conviction for a sexual offense. Likewise, the hazard rate increases by .68 in the time to have a new sexual conviction if the individual was required to complete substance use treatment. Whereas victim type appeared to make a difference in the probability of having a new conviction, regardless of offense type, it is no longer significant in the model to a new sexual conviction.

Table 11 Cox Regression on Time to Reconviction for a New Sexual Offense (N=6,989)

		B (SE)	Exp (B)
<i>Demographics</i>			
Non-white		-.10 (.12)	
Married		-.22 (.12)	
High school graduate		-.06 (.12)	
Age at release		.00 (.00)	
<i>MOSOP Participation</i>			
Phase II			
	Completed	-.43 (.14)**	.65
	Attempted	-.54 (.14)***	.58
<i>History and Institutional Behavior</i>			
Prior sentences		.06 (.02)***	1.06
Found guilty		.21 (.20)	
Child victim		.03 (.16)	
Major rule violation		.01 (.17)	
Drug tx.		-.12 (.24)	
Cognitive tx.		.14 (.30)	
<i>Needs</i>			
Medical support required		.27 (.32)	
Mental health support required		-.12 (.14)	
Medium/high custody risk		.17 (.15)	
Substance use tx. required		.52 (.13)***	1.68

Release

Institutional Discharge	.45 (.15)**	1.56
1995 or after	.53 (.14)***	1.70

*p<.05 **p<.01 ***p≤.001

Figures 6 and 7 specifically show the role of treatment participation on time to a new conviction for a sexual offense. The rate to failure for those that refuse treatment is significantly different from those that complete or attempt treatment; they fail at a much faster rate compared to the other groups. As previously noted, the purpose of the MOSOP is to reduce the likelihood of future sexual offending. Based on this analysis, it appears that treatment participation may make a difference in the occurrence and timing of the recidivism event. The sample size in which to make this comparison is relatively small, but motivation in treatment may be an important condition of recidivism.

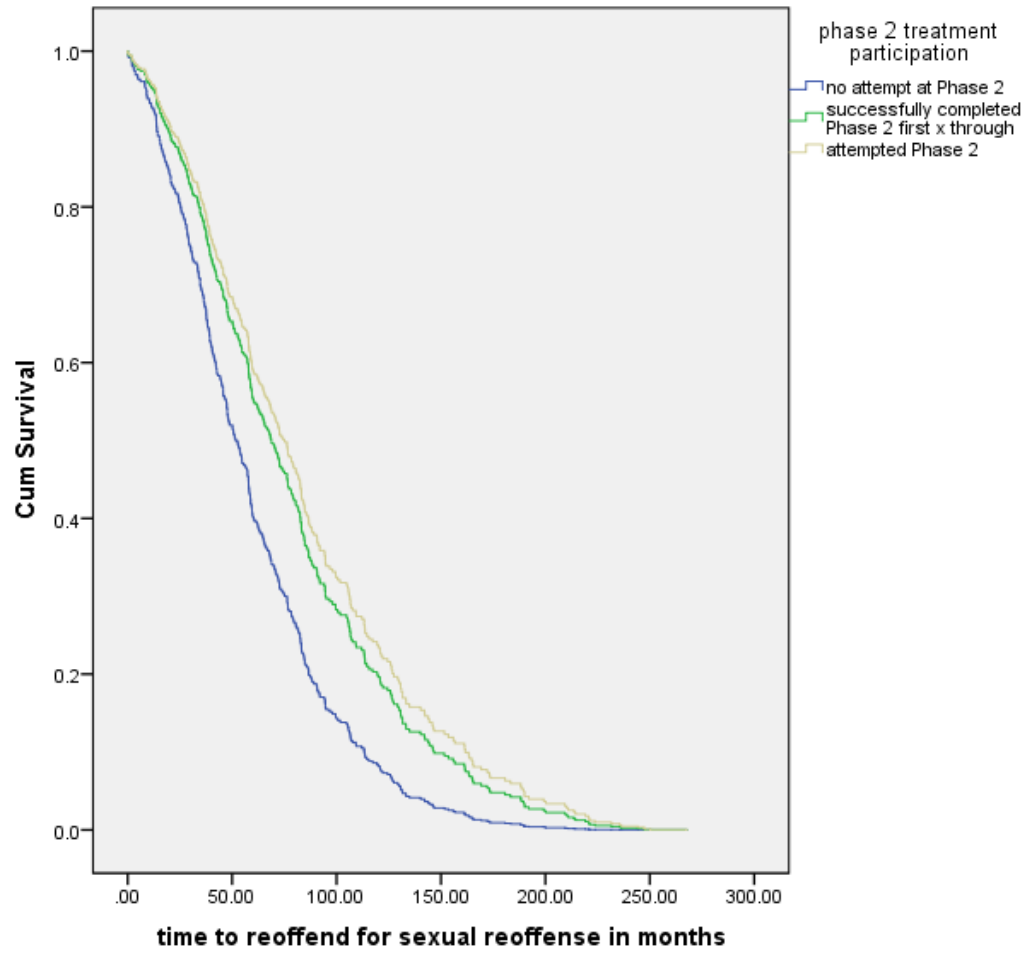


Figure 6 Cumulative Survival of Sexual Recidivism Based on Treatment Participation

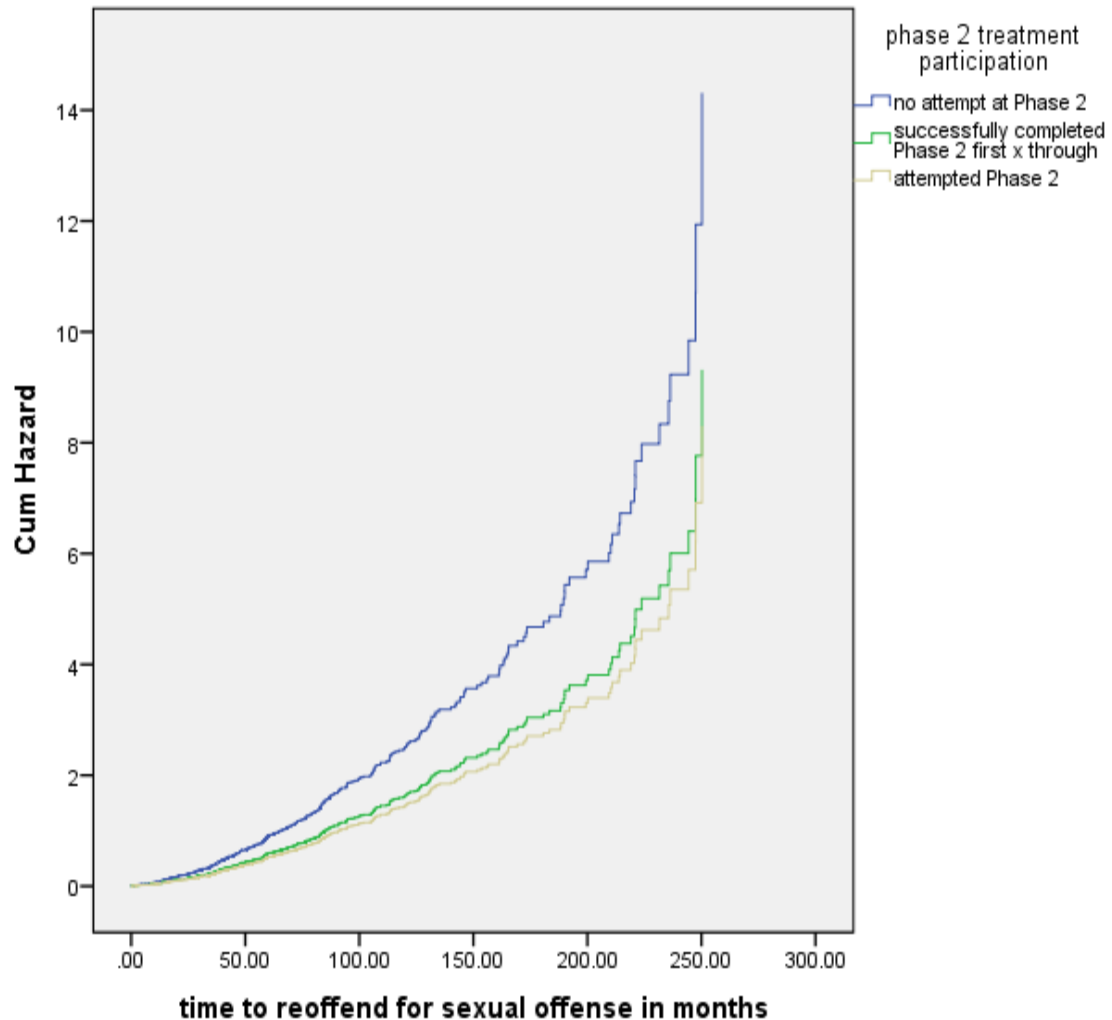


Figure 7 Cumulative Hazard of Sexual Recidivism Based on Treatment Participation

Overall, the survival analysis results paint a nuanced picture of the role of treatment participation on recidivism over time. Various factors account for who fails and when they fail during the approximately twenty-four year period. Additionally, the multiple methods used to evaluate individuals who were convicted of sexual assault offenses provided a number of insights that can help explain treatment participation and what may reduce recidivism. Treatment, substance use, and custody/risk all appeared to the odds of recidivism over time. Individuals who completed or attempted the MOSOP

program appeared to have reduced levels of recidivism relative to those that refused to participate. Required substance use treatment and custody/risk needs also appeared to have a substantive impact on recidivism over time. These individuals' needs and behavior while in prison can help explain differences among treatment groups and what may influence recidivism over time. In turn, these features can be used to tailor treatment to better improve success. It can also add to our knowledge about what works in criminal justice policy to further reduce the risk of recidivism. Protecting the public and maintaining safety are chief concerns in passing legislation specific to this population. As a result, it is important to know what works.

CHAPTER 5: DISCUSSION AND CONCLUSION

The purpose of this study was to evaluate the role of the MOSOP treatment for individuals incarcerated for a sexual offense and how it impacts their recidivism over time. Two main research questions guided this research: What are the differences between sex offenders who complete treatment the first time through, go through treatment multiple times or fail, or refuse treatment? What is the overall rate of recidivism between sex offenders who complete treatment and those that do not? A number of different findings emerged that give insight into incarcerated individuals that are mandated to treatment. This section will address first what the findings suggest about the types of individuals who participate in treatment. Then, the features that impact recidivism will be discussed as a way to identify ways to further improve treatment. The chapter will end with the policy implications related to the findings as well as future aims of research based on what is known about this particular population.

TREATMENT PARTICIPANTS

The goal of the first phase of the study was to better understand the characteristics that differentiate those who participate and complete treatment. In the present study, treatment participants were separated into three groups: those that successfully completed treatment the first time through (completers), those that refused to participate (refusals), and those that attempted treatment (attempters), regardless if they were ultimately successful. This was done in order to understand what factors may impact who participates in treatment, which, in turn, could influence ultimate treatment completion and future offending behavior. Individuals that successfully completed the MOSOP the first time through made up a little less than half of the sample size (46%, or n=3,323).

The attempter group was comprised of 1,712 individuals, and the refusal group was comprised of 2,158 individuals.

Overall, the refusal group appears to be inherently different than the completion and attempter groups. Individuals that were in the treatment refusal group were significantly different than completers on all variables assessed in the model. Some of the largest differences were related to being a high school graduate, required substance use treatment, and participating in cognitive treatment. The refusals were unlike the attempters on all factors except for race, marital status, and age at release.

Education emerged as one of the best predictors of treatment participation. The odds were increased anywhere from 50% to over double that someone with a high school degree or its equivalent was able to complete treatment the first time through. The program includes multiple readings and homework assignments as individuals work through the treatment process. It may be that the program requirements are more difficult for individuals with less education, and they are less likely successfully complete treatment (Pelissier, 2007). Likewise, individuals in the refusal group had higher mental health needs than the other two groups. There may be variation in the level of functioning among those that refuse treatment such that other factors take priority over treatment or make it so the individuals cannot cognitively process the treatment being offered. Research suggests that treatment may need to be tailored to these individuals' specific skill-deficits (Harris et al., 2010; Stinson & Becker, 2013). If treatment is a one-size-fits-all, as was at the MOSOP during the time period evaluated, then it may be harder to be successful if the individual has educational needs or mental health challenges.

Although some needs were negatively associated with treatment completion, substance use treatment was positively associated with completion. The odds were significantly higher that someone who was required to complete substance use treatment also completed or attempted MOSOP treatment. Interestingly, the completers had the highest needs for substance use treatment relative to the other groups. Research suggests that many individuals incarcerated for sex offenses report being under the use of a substance at the time of their crime (Krannen & Emmelkamp, 2011; Peugh & Belenko, 2001). These individuals may have used drugs or alcohol as a maladaptive coping strategy to manage their deviant urges. When this failed, they engaged in sexual offending. Extant literature supports that substance use may act as a disinhibitor or indicate behavioral dysregulation, which can lead to sexual offending (Seto & Barbaree, 1995; Stinson & Becker, 2013). As a result, it may be that these individuals did not plan their offending and felt bad after committing the offense (Proulx et al., 1999). This view is representative of an avoidant pathway as a way to explain sexual offending behavior (Polaschek, 2003; Ward & Hudson, 1998; Yates & Kingston, 2006). If these individuals felt bad about their offense then they may be more interested in participating in treatment to find better coping strategies in the future.

Motivation to acknowledge the crime may be another marker of motivation to change behavior and impact treatment participation. In the analysis, the completer and attempter groups were less likely to have been found guilty relative to the refusals. Put another way, individuals who ultimately completed treatment were also more likely to plead guilty at trial. Although there could be alternate reasons to explain making a plea (e.g. a lesser charge or shorter sentence), it could also indicate a willingness to confess or

acknowledge the criminal act and to accept legal consequences. Individuals who have come to terms with the nature of their criminal offense and have acknowledged it in court may be more motivated to participate and/or complete treatment in this scenario. Research supports that individuals who have higher motivation at the start of treatment are likely to be more successful in completing treatment (Pelissier, 2007). The results also support that those in the completer and attempter groups were more likely to have participated in drug or cognitive therapy, and the refusal group was less likely to engage in other programming. Therefore, it may be that MOSOP treatment participants were already more primed to participate in the treatment given that they were also participating in other programming while incarcerated. These various reasons may help explain why some individuals show a willingness to participate in treatment within the prison environment.

Treatment at the MOSOP occurs in a therapeutic community (TC) environment, and individuals bear a lot of responsibility in regulating their behavior (De Leon, 2000). Individuals with high custody/risk needs could present a challenge in completing treatment. Their needs may make it so they are unable to participate or ultimately be successful in the treatment environment. Those that refused to participate in treatment had more rule violations than the other two groups. Additionally, both the refusal and attempter groups had higher risk needs than individuals in the completer group. Refusal, lack of compliance, and segregation were among the reasons uncovered in the analysis to explain why attempters may have left treatment. These behaviors make it more challenging for individuals to ever be successful in treatment, and they help explain why risk management needs should be considered when evaluating treatment participation.

Treatment participation also varied as a result of victim type. The completer and attempter groups had higher odds of having a child victim whereas the refusal group was more likely to include individuals who had adult victims. Beyko and Wong (2005) found that rapists were more aggressive and more likely to drop out of sex offender treatment when compared to people with child victims. In assessing who was likely to drop out of treatment, the authors were trying to identify this as a shortcoming of the treatment program that needed to be addressed in order to gain participation. It could be hypothesized that individuals convicted of rape have anger and/or management issues so they are quicker to drop out, or they have an increased likelihood of getting removed from treatment because they are more challenging to deal with. It may also be that those convicted of rape were less willing to participate in treatment in the first place.

Overall, the results highlight some important differences among individuals who engage in treatment. There appears to be variation in cognition, motivation, and offending history that may impact the level to which an incarcerated individual will comply with treatment. Research suggests that an individual's pathway to offending or preferred victim type may represent thinking patterns or behaviors that could be used as treatment targets (Yates & Kingston, 2006). What works may vary based on these individuals' unique needs, and these could be explored further as a way to enhance participation in the MOSOP. This is critical for discussion, as the results suggest that treatment may impact recidivism rates.

RECIDIVISM

Recidivism for this population of incarcerated individuals was impacted by a number of factors. A key finding was that completing the MOSOP treatment significantly

reduced the likelihood of having a new conviction for any type of offense or a new sex offense. Completing and/or attempting treatment decreased the odds by about a 20% that an individual would have a new conviction for any type of offense. The odds were reduced by over half that an individual who completed treatment the first time through would have a new sexual conviction. The odds were also reduced by a quarter among those that attempted treatment, regardless if they were successful. Individuals who refused treatment had higher recidivism rates during the follow-up period. Other research using individuals incarcerated for sexual offenses has also found that failure to comply with treatment was significantly related to re-offending (Seager, Jellicoe, & Dhaliwal, 2004). Additionally, the impact of treatment appeared to have an enduring effect over the time period under study. This was true for both those who attempted treatment in addition to those that completed treatment. A new conviction of any kind within the first ten years of release was reduced between 20-40% among individuals that attempted or completed treatment. There was more disparity when assessing a new conviction for a sexual offense. A new conviction for a sexual offense was reduced by 65-70% among individuals that completed treatment the first time through during the three follow-up periods. Even those that attempted treatment, regardless of success, had reduced odds of approximately 40% of a new sexual conviction within the first ten years after release. The findings from this research are consistent with other work with this population. Olver et al. (2009) also found differences in sexual recidivism during a ten-year follow-up period based on treatment participation. The differences in the recidivism rates in the Olver et al. (2009) study were at their greatest two years after release from prison, but the odds were

still reduced after ten years. There appear to be some gains that can be made in treatment that impact the likelihood of a new sexual conviction over time.

Survival analysis conducted in the present study also showed some differences among those that participated in treatment and those that refused. The trend lines yielded very similar results for those that successfully completed treatment the first time through and those that attempted treatment, even if they were not ultimately successful. Differences began emerging within the first few months after being released from prison and remained dissimilar during the full follow-up period. The cumulative hazard rate yielded a similar finding in which the risk was much higher for the refusal group. The main purpose of the treatment through the MOSOP is to reduce future sexual offending, and differences in recidivism based on treatment participation emerged as an important finding.

In addition to the impact of treatment, other variables that influenced recidivism included many demographic and historical factors such as race, age at release, and prior offense history. The findings associated with an individual's background are similar to what other research has found with both a sex offender and non-sex offender population (Meloy, 2005; Nagin, Farrington, & Moffitt, 1995; Tewksbury, Jennings, & Zgoba, 2012). For instance, Meloy (2005) found that age, prior drug abuse, and prior felony convictions were all significant predictors of non-sexual recidivism, and other studies have shown that criminal history is an excellent predictor of future behavior (Kurlychek, Brame, & Bushway, 2006; Tewksbury et al., 2012). Research also supports that general recidivism is higher among non-white individuals as opposed to offense-specific behavior (Hanson and Bussière, 1998; Mathesius & Lussier, 2013; Miethe et al., 2006). In the

present study, individuals who were a minority were more likely to have a new conviction and/or be returned to prison for either a new offense or technical violation. Specific to age, the results showed that the odds of a new conviction decreased the older the individual was upon release. Thornton (2006) has suggested that age at release is a good predictor of general recidivism, and individuals who are older at release have a decreased likelihood of sexual recidivism (Barbaree et al., 2003; Barbaree et al., 2009). Tewksbury et al. (2012) also found that age and prior offense history significantly predicted the likelihood of sexual re-offending. The finding related to age may also help explain why individuals requiring heightened medical support also have a decreased likelihood of recidivating over time. Health issues may preclude an individual from having the ability to engage in additional offending behaviors after release.

The present study found that only a very small percentage of the individuals had a new conviction for a sexual offense during the follow-up period (5.6%), which is consistent in the extant research (Meloy, 2005; Mercado et al., 2013). One of the strongest findings was related to required treatment for substance use and the likelihood of a reconviction for a sexual offense. The odds were significantly increased that individuals requiring substance use treatment were more likely to be reconvicted for a new sex offense during the follow-up period. Research supports that use of alcohol or other drugs is very common among incarcerated populations (James & Glaze, 2006). As previously noted, there also may be something specific to an individual engaging in repeat sexual offending that has led to the use of substances either leading up to or during the offense.

Registration requirements for individuals convicted of sexual offenses also emerged as an interesting finding in predicting reconviction for another sexual offense. Individuals released after the new residency restriction laws went into effect in 1995 decreased the odds of a new sexual conviction, but there was an increased likelihood of a return to prison. The differences may have occurred because of heightened detection (Petersilia & Turner, 1993). These individuals may be able to be re-incarcerated quicker on a technical violation rather than for a new offense. To be sure, being fully discharged from prison without conditions had lower odds of a return to prison. An alternate view is that individuals who commit sex offenses take longer to get caught for their behavior, thus detection may be delayed (Mathesius & Lussier, 2013). This may give the appearance of a decreased likelihood of a new conviction for a sexual offense.

The findings may also suggest that there is some deterrent effect based on the change in the notification laws that occurred in 1995 specific to sexual re-offending behavior. Other research has examined the impact of registration and notification laws on sexual offending (Mercado, Alvarez, & Levenson, 2008; Vasquez, Maddan, & Walker, 2008). Research by Tewksbury et al. (2012) did not show a relationship between these new laws and sexual offending. However, this and other research suggests that there are collateral consequences that these individuals may face as a result of these laws. These types of laws have led to perceived challenges in finding housing or employment (Meloy, 2006; Mercado et al., 2008). Furthermore, based on interviews in Meloy's (2006) study, the individuals did not feel like notification/registration had any deterrent effect on offending behavior. Finding gainful employment, housing, and creating ties to the community are factors that can significantly reduce the likelihood of re-offending

(Maruna, 2001; Petersilia, 2003), so these laws may have unintended consequences that negatively impact individuals and could possibly lead to increased recidivism.

Another component of the present study was to assess the relationship between victim type and recidivism. Research has shown that individuals who have a sexual offense against a child are more likely than other types of convicted individuals to have another sexual offense against a child, especially if the child victim is a stranger (Harris et al., 2011; Przybylski, 2015). In the present study, victim type did not predict overall recidivism. However, when the victim type was specified in the model and sexual recidivism was evaluated, significant differences emerged. The odds were over double that an individual who offended against a child was more likely to have a new sex offense conviction during the follow-up period. Race also mattered when comparing individuals with child versus adult victims. Among those that had a new sexual conviction, the odds were decreased that the offender was black or other minority. Put another way, a white male was more likely to have a child victim. This relationship is also supported in extant literature (Gannon et al., 2008; Greenfeld, 1997). There may be something specific to this type of individual that leads to an increase in specialization relative to other types of offenders (Lussier et al., 2005; Miethe et al., 2006).

Interestingly, when comparing the time to recidivism, victim type mattered on time to a new conviction for any type of offense, and it was in an unexpected way. Individuals who had a child victim were significantly quicker to have a new conviction versus those that had an adult victim. The groups appear similar during the first four years post-release from prison, but then differences clearly begin emerging around the five-year mark. The two groups merged again around fifteen years post-release. The

hazard rate revealed a variation as well in which incarcerated individuals who had child victims had a higher hazard of recidivating more quickly. The model shows differences emerging around the five-year mark as well, but the groups remain disparate until the end of the study period. There was not a significant difference when looking at the time related to sexual recidivism. Research supports that individuals convicted of sexual offenses have a greater overall risk of general recidivism than sexual recidivism (Przybylski, 2015). Sample and Bray (2006) also found that individuals convicted of a sex offense against a child recidivated at a higher rate within the first five years than those convicted of rape or other sexual offenses. Individuals who have committed sexual offenses are not a homogenous group, and recidivism rates vary over time and by type (Prentky & Lee, 2007; Przybylski, 2014a).

The recidivism rates for this population of incarcerated individuals were low, especially when considering the rates of a new sexual conviction over time. Factors that appeared to have the greatest impact over time on recidivism of any kind and sex-offense specific included treatment completion, age at release, prior offense history, and custody risk needs. Education also made a difference related to overall recidivism, and substance use treatment needs had an impact specific to sexual offenses. A number of the variables that emerged as significant in the study are aspects that can be targeted within the prison environment. Chief among them is fostering participation in the MOSOP treatment. Tailoring treatment to account for specific needs related to an individual's education, custody risk, and substance use/drug treatment could improve the outcome further in the future.

LIMITATIONS AND FUTURE RESEARCH

The available data were rich with information related to individuals who were incarcerated for sexual offenses and their recidivism over an extended period of time. However, there are limits with the data. Official records were utilized to assess the individuals under study. It is well known that official records can lead to some bias in that they only include offenses known to authorities, like the police or correctional staff (Piquero, Farrington, & Blumstein, 2003; Przybylski, 2014a; Zimring et al., 2007). Additionally, this study represents only individuals who were convicted and incarcerated for a sexual assault offense and had access to the MOSOP. Research supports that sex offenders can be good at avoiding detection (Lussier & Mathesius, 2012). Incarcerated individuals may also represent those with a longer offending history, which has led to serving time as opposed to those who have a limited offense history.

A strength of the study was the time period available for evaluation. Incarcerated individuals were included in the analysis if they were released from 1991-2010, and recidivism rates could be tracked through September 2014. This represents an approximately twenty-four year period. However, the available data do not account for any specific programmatic changes over time. The use of official records makes this information difficult to attain. Overall, the major treatment model throughout the study period was comprised of components from cognitive-behavioral treatment (CBT) and relapse prevention. Staffing changes and/or shifting priorities during the available time period could not be captured in the present analysis. It is hard to denote if or when minor or major adjustments were made to account for any of the findings related to success of treatment. The findings revealed that treatment at the MOSOP may be effective, but a

more nuanced look to understand whether there was specific variation would be important for future research.

There were some other limits related to the data available for the population under study in the current project. For instance, obtaining Stable scores pre- and post-program participation could be helpful in assessing short-term change. The Stable is a risk assessment tool used to evaluate dynamic, or changeable, factors that can impact future offending (Harris & Hanson, 2010). Instituting risk assessments is something that the MOSOP began around 2009, so there was not sufficient information in which to make meaningful conclusions among participants at this time.

Likewise, IQ was not consistently measured throughout all the study years; different tests were used, and there was a high level of missingness among the individuals in the dataset. Some research suggests that IQ may not significantly impact recidivism rates among individuals convicted of sex offenses against children (Hanson, Steffy, & Gauthier, 1993). However, mental health needs were significantly different among treatment participants in the present study. More recent literature suggests that a lower IQ or mental illness could impact individuals with sexual offenses in understanding their offending behavior, which could affect the likelihood of re-offending in the future (Harris et al., 2010; Stinson & Becker, 2013).

There were additional factors that could not be assessed using available data. Information was not present regarding whether an individual participated in Phase III of the treatment program, which included treatment in the community after being released from prison. It is unclear if there was any impact as a result of this type of treatment on recidivism over time. Similarly, behavior was not tracked when individuals were not

under supervision after release. This included if the individual died during the follow-up period or situations in which the individual left the state. The data can only show those that were released and recidivated in Missouri. Related to this was the type of technical violation that led to an individual being re-incarcerated. Initial descriptive analysis showed that there was a significant difference among new incarcerations/technical violations for the completers relative to the other treatment groups. However, the date for technical violation and new incarceration were coupled together in the data. Furthermore, the reason for technical violation was not specified.³⁷ Due to this, it could not be determined whether the act or behavior was different between someone who was under supervision in the community and those not receiving monitoring. Individuals under supervision are more closely monitored, and therefore, may be easier to capture and re-incarcerate.

There can be limits based on the way recidivism is defined. Reconviction and return to prison are more conservative estimates than using rearrest data. Additionally, using reconviction or a return to prison suggests decision-making throughout the criminal justice system whereas arrest data would indicate an individual's first contact with police after a potential crime. A goal of the project was to obtain arrest data through the Missouri State Highway Patrol. These records were not feasible to access, so I was unable to evaluate recidivism using first arrest. Some research suggests that arrests provide the best measure of criminal behavior because it occurs closest in time to the

³⁷ Further efforts were made to tease out sub-cycles of offenses in which to make conclusions related to the kinds of technical violations. It would have been interesting to be able to compare whether the types of technical violations would be similar to new charges/convictions among the attempter and refusal groups, as technical violations may be related to restrictions associated with all sex offenders (e.g. failure to register, residency restrictions, violating buffer zones, and/or other conditions). The latter two groups may receive a new charge instead of being technically violated and returned to prison. However, the data did not permit additional conclusions to be drawn.

actual offense rather than a change in charge that could occur later in the justice process (Harris et al., 2011; Piquero et al., 2003; Weisburd et al., 2001). Furthermore, in the present study, plea type was significantly different between the completers and attempters when compared to the refusals. The findings suggested that individuals who completed or attempted treatment were more likely to have pled guilty than those that refused treatment. This may signify a willingness to accept responsibility, thus changing behavior so as to reduce the likelihood of re-offending in the future.

A number of important findings were made in the present study despite some shortcomings related to the available data. The questions under study were specific to the role of treatment on a group of individuals that were imprisoned. Therefore, the individuals in the MOSOP represented an ideal group in which to evaluate. Future research could build on the results of this study by disentangling components of the treatment program more specifically. Any modification to the treatment milieu during the time period under study could not be fully captured. Incorporating the findings related to the risk assessments given to individuals pre- and post-completion of treatment may help identify program effectiveness in the short-term. The Static assessments could be evaluated among a subset of the individuals who were in the treatment program.

Additional background factors would also be important gather to better understand treatment effectiveness. This could include features related to an individual's mental health above and beyond a dichotomous measure identifying whether support is required. Research by Harris et al. (2010) identifies the growing need to understand the relationship between individuals who have committed a sex offense and have serious mental illness. IQ may be another way to understand the cognitive level of the individuals

who are treatment participants. This information could then be used to determine if modifications could be made to better tailor treatment to the individual. Also, it would be interesting to more fully explore the relationship between plea type and treatment participation. A number of reasons could be used to explain why someone pleads guilty or chooses to have a trial for their sex offense charge, but there is evidence to suggest plea type may be linked to motivation in treatment (Clegg et al., 2011).

There is a lack of research regarding the TC environment for sex offenders (Ware et al., 2010). The MOSOP takes place within a TC in one main location. Something that should be considered in future research is assessing what, if any, role the specific treatment environment has on the individuals who are participating in treatment. These individuals are removed from the general prison population during the second phase of treatment while those that refuse treatment remain in the general correctional setting. Even among treatment attempters, they are getting exposure to the separate environment, and there may be gains made unrelated to treatment that account for some of the success observed in the study. There could be further opportunities to improve outcomes for those that refuse treatment by allowing them in the environment and/or building on the factors that appear to make a difference on recidivism over time.

Motivation

One of the main challenges in evaluating how an intervention, like treatment, can impact behavior change over time is how to appropriately account for or measure motivation. As noted previously, there were significant differences between treatment completers and treatment refusals. Individuals who complete treatment may have been motivated from the start and treatment may not make an appreciable impact on

recidivism. The present study tried to address this shortcoming by evaluating individuals that also attempted treatment, regardless if they were ultimately successful. This group may represent individuals who are in the contemplation stage of change (Prochaska & DiClemente, 1982), and the impact of treatment can be teased out by considering this group separate from the other treatment participants. Future research should consider the motivation to change and how that impacts program outcomes. One way to do this is to assess the stages of change, which has been used in prior research. McMurran et al. (1998) incorporated a questionnaire using the stages of change to individuals participating in treatment. Though the findings were limited, they provide one way to determine who might be most in need of treatment: those that are in the precontemplation or contemplation stage, which may represent individuals with low motivation to change. Individuals that attempt treatment as considered in the present study can offer some unique insights into what can work to reduce recidivism over time.

Future studies that can better account for motivation could build on the present findings. Research by Bellg et al. (2004) addresses three components of motivation to help understand treatment fidelity: treatment delivery, or how treatment is taught to the participants; treatment receipt, or what the participants learn; and what is enacted, or what participants actually use in the future after the intervention. Ideally, future research could incorporate the evaluation of these internal, programmatic changes to address short-term change in addition to long-term impact. A study by Marques et al. (1994) accounted for the receipt of treatment by including a measure related to ensuring comprehension of treatment. In the Marques et al. (1994) study, some differences emerged among individuals that ‘got it’ or understood treatment. Measures to address

comprehension as well as what is enacted by treatment participants would improve the outcome analysis.

Motivation could also be accounted for by isolating the reason for participation at treatment entry. For instance, research on workplace decision-making suggests initially measuring whether the value to participate is due to extrinsic or intrinsic factors (Mortimer & Lorence, 1979; Wright & Grant, 2010). Wright and Grant (2010) identify this as a question of whether motivation is an antecedent or consequence, and they suggest completing research that accounts for this at the beginning of an evaluation and then conducting multiple checks throughout the study period. Barrett, Wilson, and Long (2003) measured motivation at four points throughout the treatment process and post-release from prison among individuals convicted of sexual offenses in Canada. Through either self-report or incorporating the reason for treatment participation into the surveys conducted during Phase I of the MOSOP would be one way to identify front-end motivation to determine if it is external or internal. Teasing out this component could better elucidate any findings related to treatment over time.

There are a number of features that could be improved in future research to build on the present study. Motivation to begin treatment and continue treatment is challenging to fully account for given the unique needs of the population under study. Individuals convicted of sexual offenses are not homogenous, and different factors may promote or impede participation in treatment. Specific to the MOSOP, individuals are heavily incentivized to participate in treatment in order to potentially be released ahead of their maximum sentence. Understanding this decision-making to participate is an important consideration to tease out treatment effectiveness. Participation can impact these

individuals in a number of ways given the numerous interventions targeting this population after their incarceration ends.

POLICY CONSIDERATIONS

Individuals convicted of sexual offenses face unique consequences that are not faced by other incarcerated populations. These are often the result of legislators' perceptions of sex offenders and the laws that would appear to address the issue of future offending (Sample & Kadleck, 2008). Specific policies aimed at individuals who have committed a sexual offense can occur during incarceration (e.g. sex offender treatment) or after the individual is released from prison (e.g. registration, notification, residency restrictions, and civil commitment). Therefore, from a policy perspective, it was important to understand whether treatment during incarceration could be an effective method at reducing recidivism. The present study was able to shed light on the impact of treatment for individuals in prison, and this could be used to provide insight on other policies targeting this population.

Perhaps one of the most invasive consequences individuals incarcerated for sexual offenses can face is civil commitment after being released from prison. If an individual incarcerated for a sexual offense is deemed to have a mental abnormality and constitutes a high risk to re-offend, they can go through a hearing and be remanded to indefinite confinement (Becker et al., 2003; Deming, 2008; Levenson, 2004). Twenty states currently have civil commitment policies enacted for sexually violent predators, including Missouri (RSMo 632.480-632.525). The facility is located next door to the MOSOP in Farmington. The purpose of civil commitment is to further rehabilitate the individual, but there is no timeline for release (Deming, 2008). Civil commitment is

controversial, though it has been upheld as constitutional by the U.S. Supreme Court in multiple cases (*Kansas v. Crane*, 2002; *Kansas v. Hendricks*, 1997). Civil commitment is considered reasonable by the courts because the program is treatment-based and not corrections-based; therefore, it is not considered another prison institution.

It is particularly important to understand whether psychological treatment is effective as civil commitment is predicated on the implicit belief that treatment is beneficial. The results of the present study showed a significant relationship between treatment completion and recidivism over time. If it is that treatment is effective, then a case could be made in which there is increased availability or access to it within the prison environment. Meloy (2005) suggested that sex offender treatment was the exception and not the rule based on available funding in the correctional system. The MOSOP allows individuals to have two attempts at treatment. However, they acknowledge that if an individual departs the program and wants to try again at a later time, he is put on a waitlist, and there is no guarantee that the opportunity will become available in which to participate in the future. Therefore, policy should be reviewed to increase accessibility to treatment, which may in turn reduce the need for civil commitment post-release from prison. This investment in treatment in the prison environment could lead to a cost savings in the long-term. The costs associated with civil commitment can be exorbitant (Gookin, 2007; Mercado et al., 2013) relative to prison costs. Civil commitment focuses on very few individuals deemed high-risk. Resources could be better utilized by targeting a larger group of incarcerated individuals.

Attempting or completing treatment through the MOSOP appeared to make a difference on recidivism, and this was sustained over the long-term. However, treatment

could be tailored to address the specific needs of the individuals who are participating to further enhance its effectiveness. Both the Good Lives Model (GLM; Laws & Ward, 2011) and the Risk-Needs-Responsivity model (RNR; Andrews & Bonta, 2010) in corrections support that treatment should be tailored based on the criminogenic and noncriminogenic needs and risk level of the individual. In the present study, approximately 30% of the individuals refused to participate in treatment, and approximately 24% attempted treatment multiple times. Several factors emerged that showed differences among treatment participants. These included both static and dynamic factors, like demographics, prior history, and institutional behavior. A greater emphasis could be placed on the dynamic factors that could affect treatment participation.

Changing the criteria for inclusion in treatment could lead to improved participation. The MOSOP required the individuals to admit to their offense prior to participation. If they do not admit, then they cannot participate in the program. Research suggests that denial of the offense should not preclude an individual from participating in treatment (Beyko & Wong, 2005), and denial is not a predictor of re-offending over time (Hanson & Morton-Bourgon, 2005). Individuals who deny their offense may represent an untapped group of high-risk individuals in need of treatment that are currently being denied access. This view would also run counter to the RNR model in which those that are higher risk may need more support than individuals that are a lower risk to re-offend (Andrews & Bonta, 2010). Getting individuals in to treatment would be an important first step in helping promote success.

Other aspects to support a change in behavior could be targeted to engage individuals once in treatment. If an individual refused to participate in treatment because

he did not want to admit to his offense then mechanisms to improve a person's motivation could be addressed first. This could be done by differentiating treatment groups based on those who deny committing an offense and those who admit from the outset. Individuals who attempt treatment may also have behaviors that could be targeted to improve participation. The data show that 'administrative decision' was one of the main reasons that individuals in the attempter group were removed from treatment. Specifics related to decision-making could not be identified further. It may be features in the environment or based on reasons outside of an individual's control. This is an area that could not be better understood, and it is important to recognize whether any changes could be made to keep people in treatment. A vital next step for policy is teasing out the attempter group to figure out ways to improve the number who are ultimately successful in treatment.

Tailoring treatment based on victim type is another area that could be explored further. Extant literature shows there is variation in the sexual recidivism rates based on who is targeted (Hanson & Bussière, 1998; Langan et al., 2003; Przybylski, 2015). Victim type emerged as significant in predicting treatment participation. Also, if an individual was convicted for a sexual offense against a child then he was more likely to have another conviction for an offense against a child if he did recidivate. The relationship between the victim and perpetrator was not more specifically identified in the available data based on the charge codes for the time period under study. Treatment groups based on the type of sexual offense committed could be tailored to address the cognitions and motivations related to offending. Treatment outcome may be improved by targeting the underlying motivation that led an individual into offending. These

motivations may also explain why some individuals continue to offend while others change or stop their behavior.

Treatment is an intervention used to promote public safety by working to reduce future offending from a group of individuals that are deemed high-risk. This is because public perception is that all individuals who have committed sex offenses are alike, and they have a high likelihood of recidivating (Levenson et al., 2007). The present study found very low recidivism rates overall among individuals convicted of and serving time for a sexual offense. Beyond that, treatment for incarcerated individuals appeared to be an effective intervention. The present findings can be built upon to further understand what works in treatment, how, and for whom within the prison environment.

CONCLUSION

The purpose of this study was to evaluate how treatment impacted individuals who were incarcerated for a sexual assault offense in Missouri, and how this affected recidivism in the future. In Missouri, individuals convicted of a sex assault offense are required to participate in treatment in order to be eligible for parole or conditional release. Essentially, these individuals were mandated to participate. As a result, there was a level of coercion associated with whether these individuals were considered willing participants. Individuals could opt out treatment, but this meant they would complete their full sentence while incarcerated. It is therefore important to understand the relationship between coercion as well as what it means to be motivated to participate in treatment.

Interventions that can effectively reduce recidivism should continue to be explored. Drieschner and Verschuur (2010: 88) argue that, “there would be no point in

motivating offenders to engage in treatment if the resulting behaviour had no impact on treatment outcome.” However, the relationship between motivation to start treatment, participation in treatment, and post-treatment outcomes is complex, and all steps are inter-connected. This was elucidated in the present study. Research supports that some individuals may desist regardless of any external intervention (Kurlychek et al., 2012), so treatment participation may not matter. There may be something associated with individuals who completed treatment the first time through that motivated them to be successful and committed to not recidivate in the future. Laws and Ward (2011: 6) also suggest that “treatment is simply one piece of the desistance puzzle, and not necessarily the most important one.” Nonetheless, differences emerged for individuals that attempted treatment, even if they were not ultimately successful. Thus, there may be aspects of treatment that help promote a change in behavior over time. These factors should be examined more fully in the future. Policy can be improved when we understand what works best to reduce recidivism among this population.

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